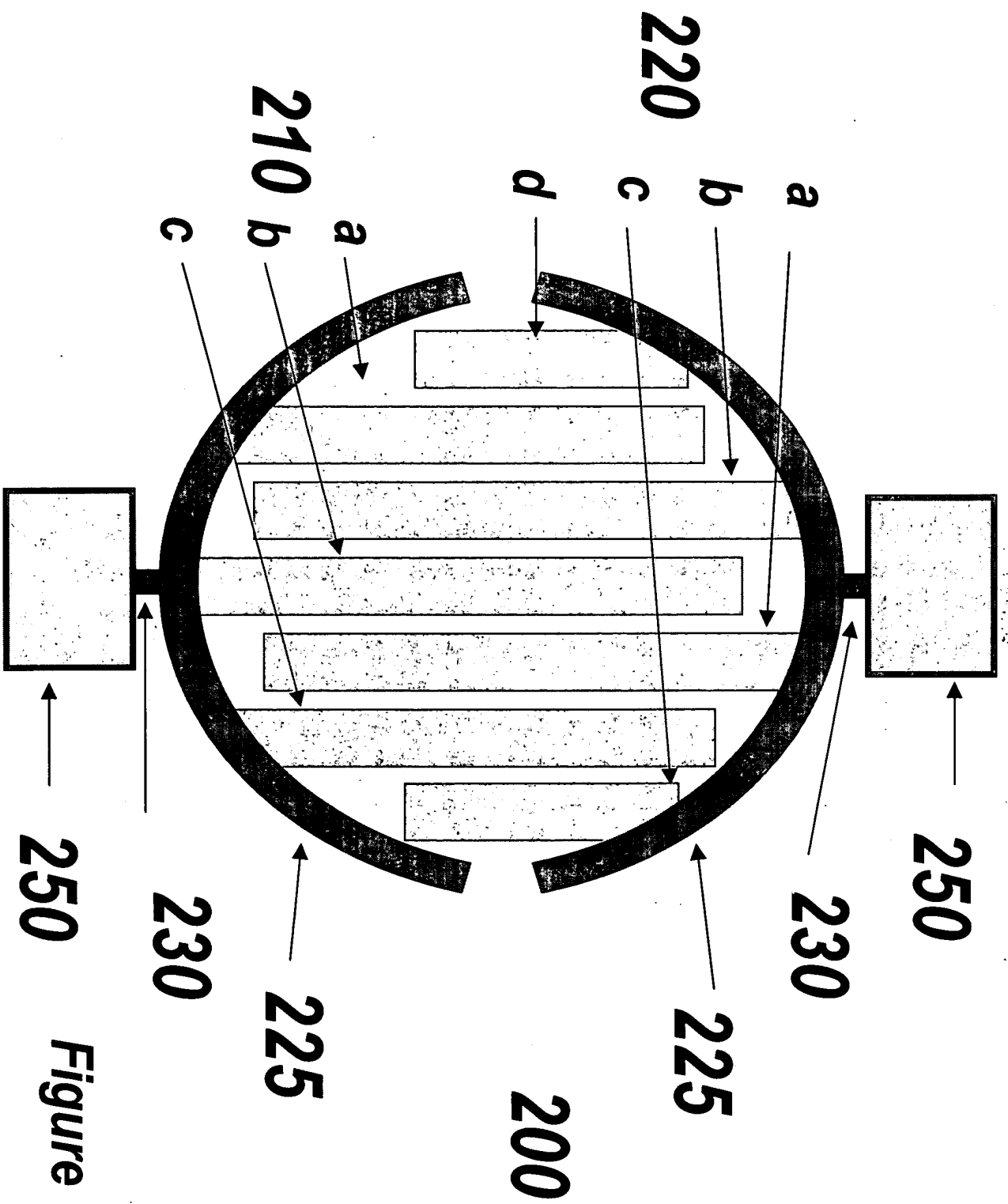


Figure 1A



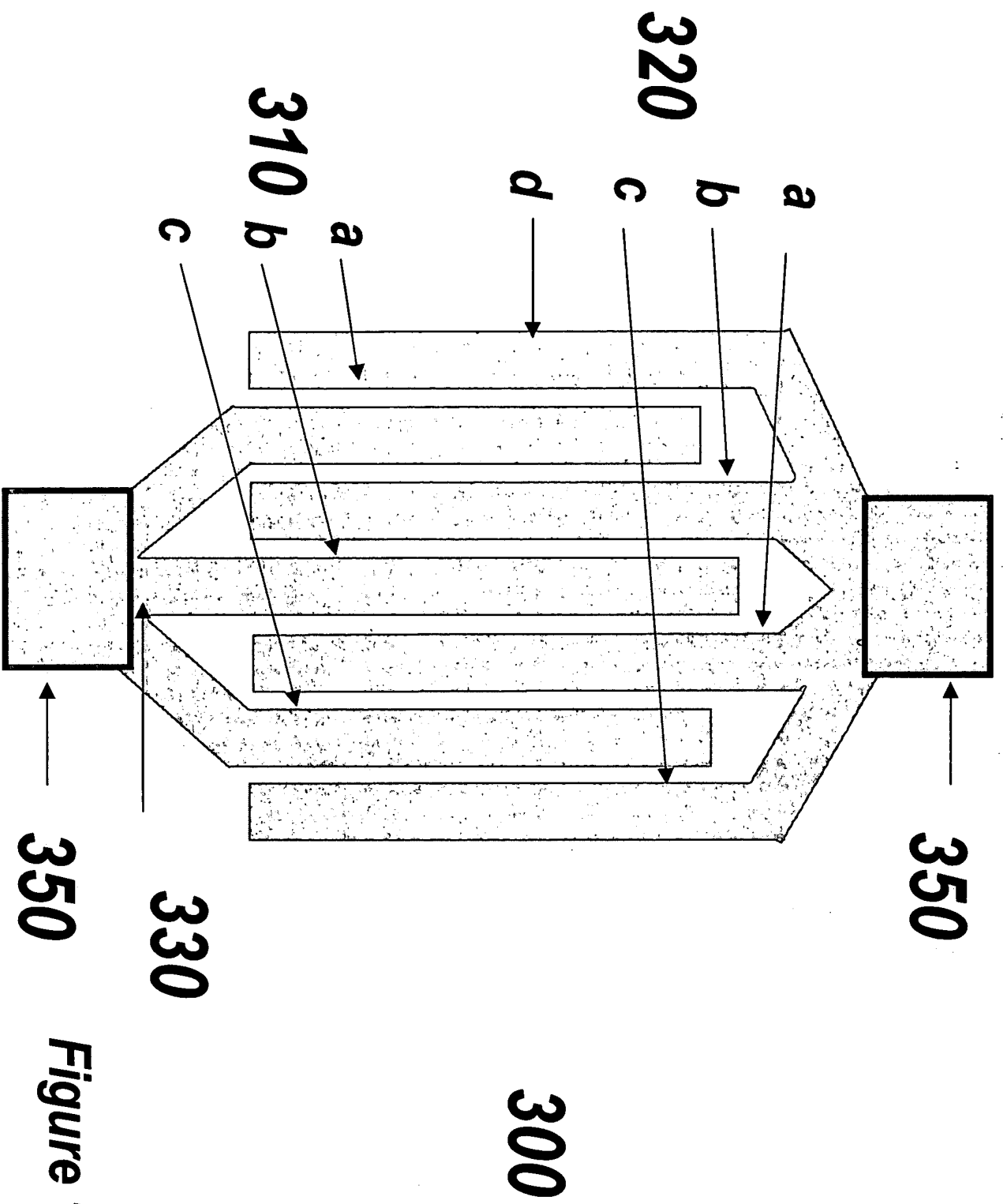


Figure 2

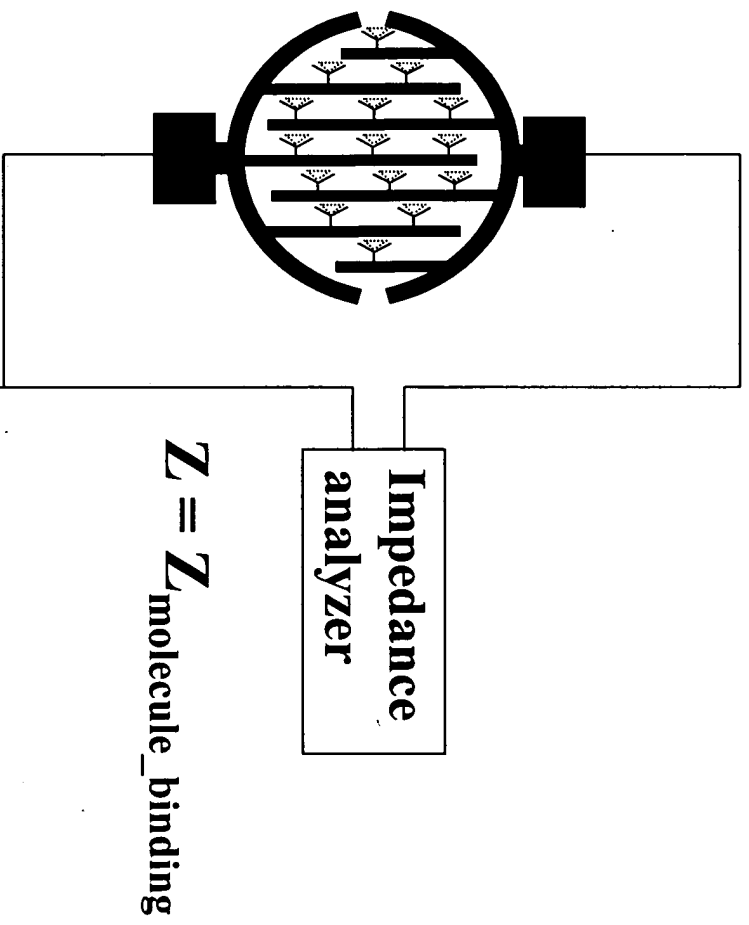
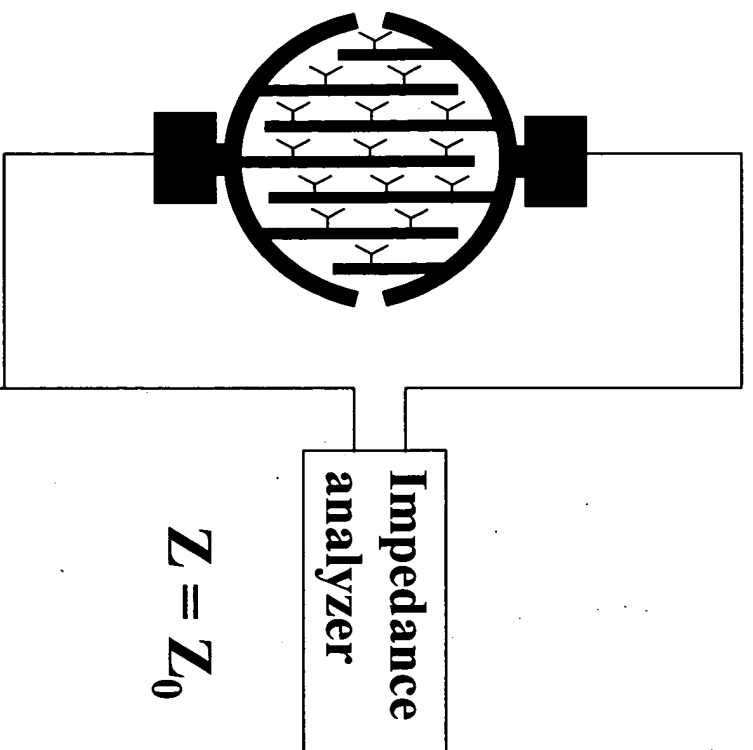
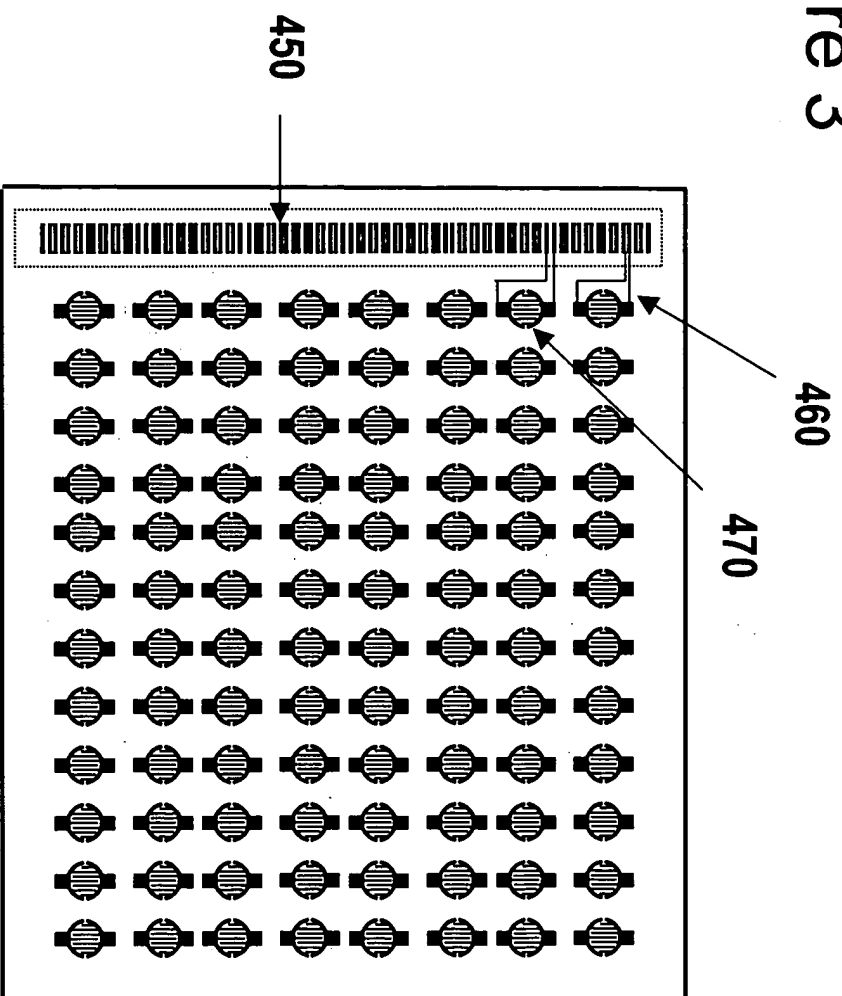
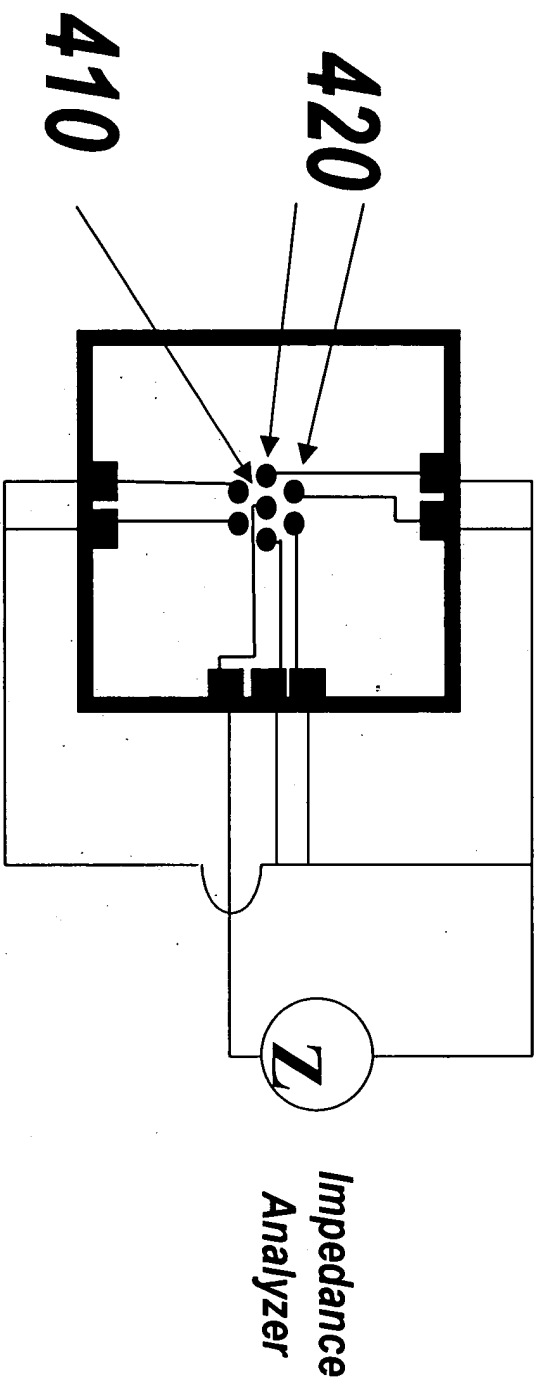


Figure 3



Microelectrode plate (96-well plate)

Figure 4A



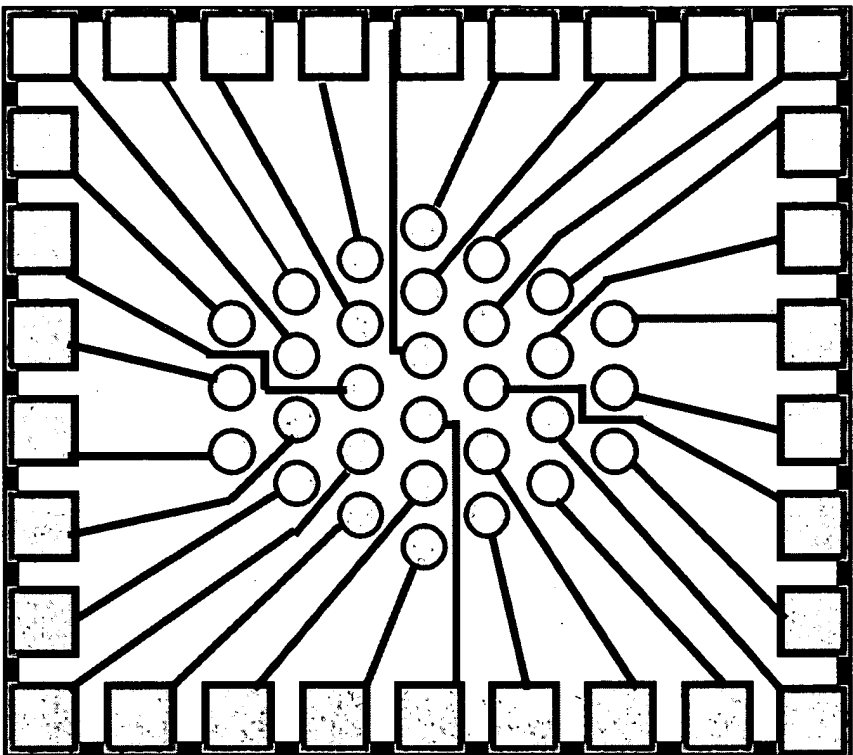


Figure 4B

Figure 5

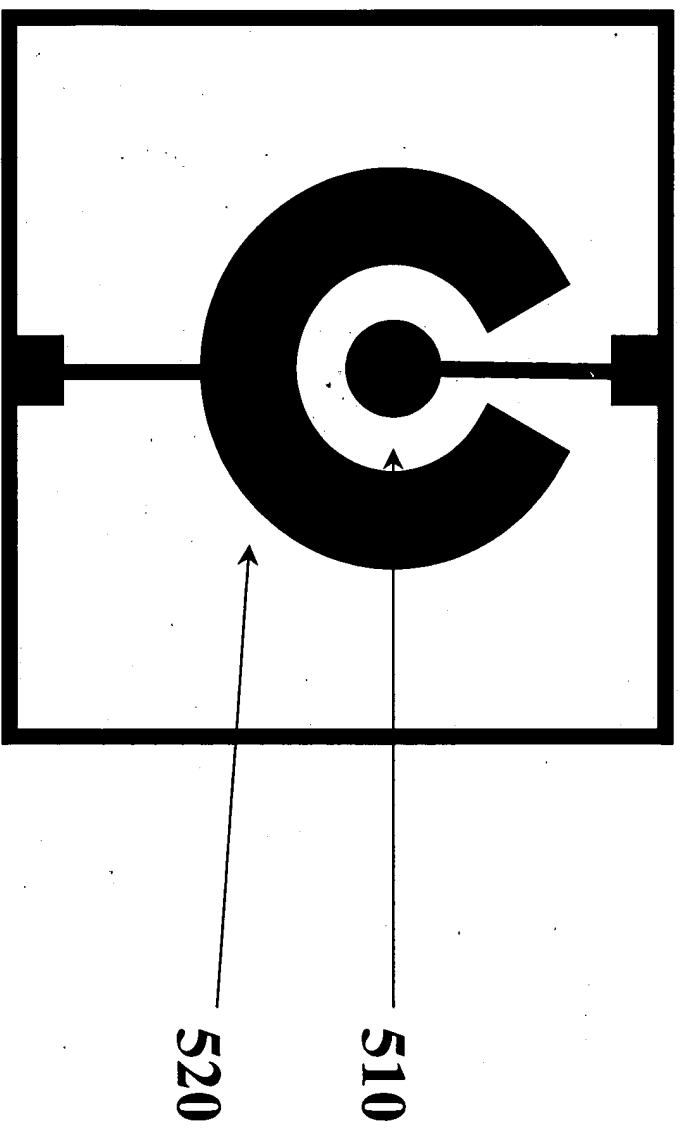


Figure 6

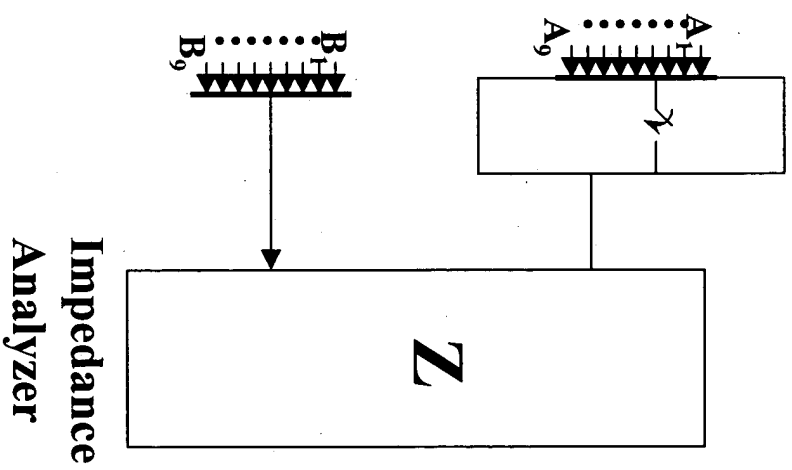
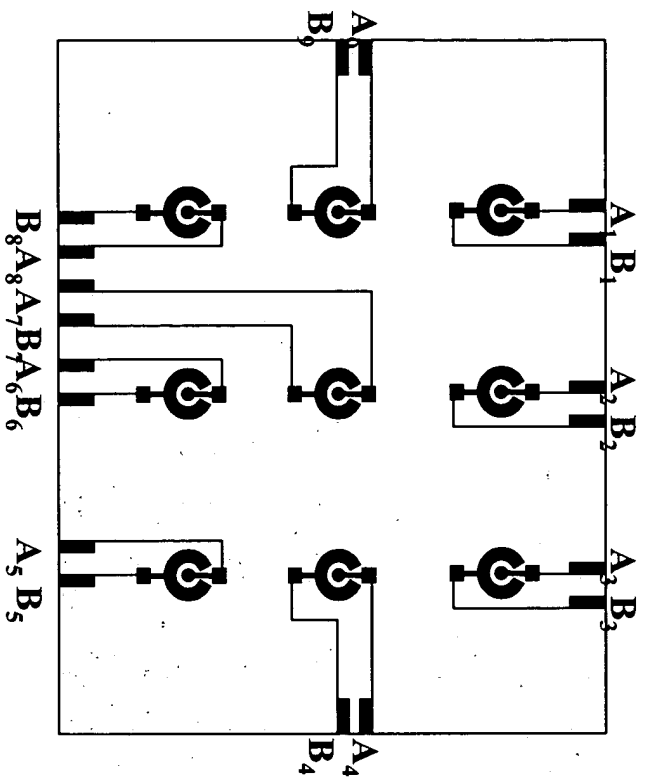
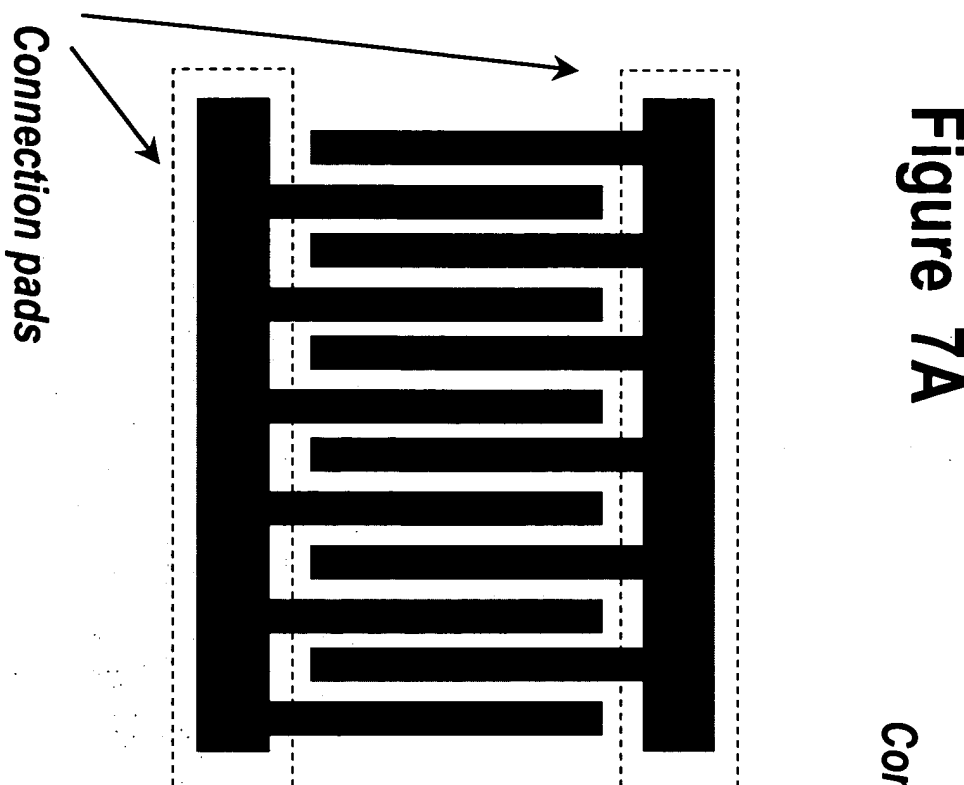


Figure 7A



Connection
pad



Connection
pad



Figure 7B

Figure 7C

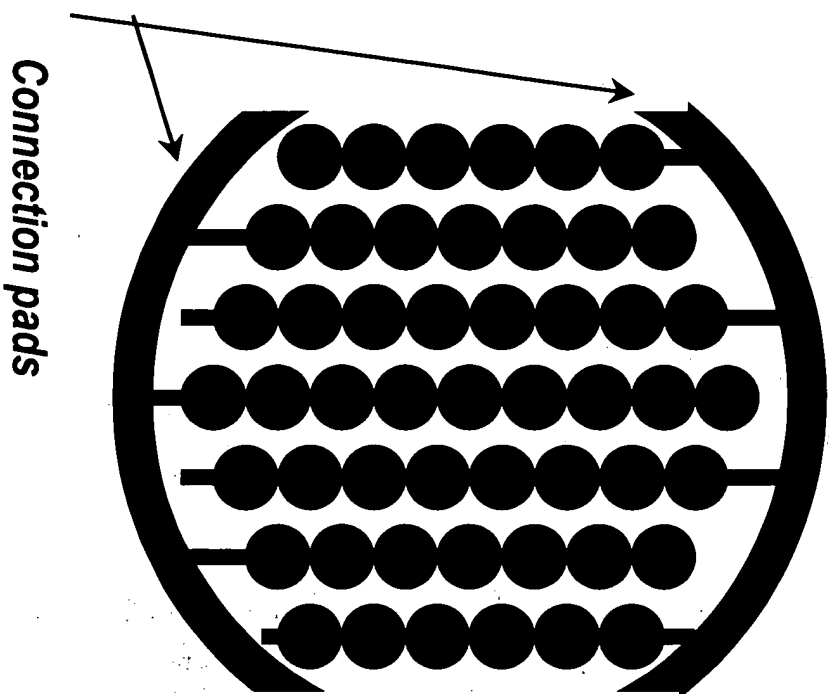
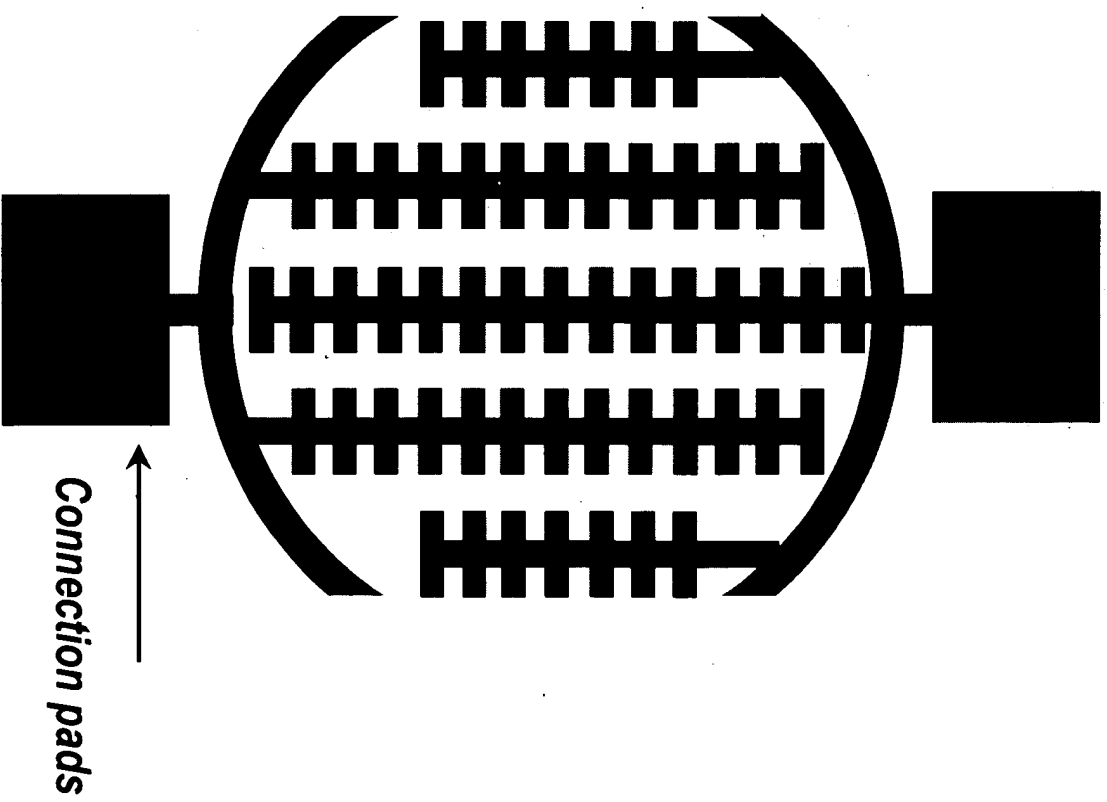


Figure 7D



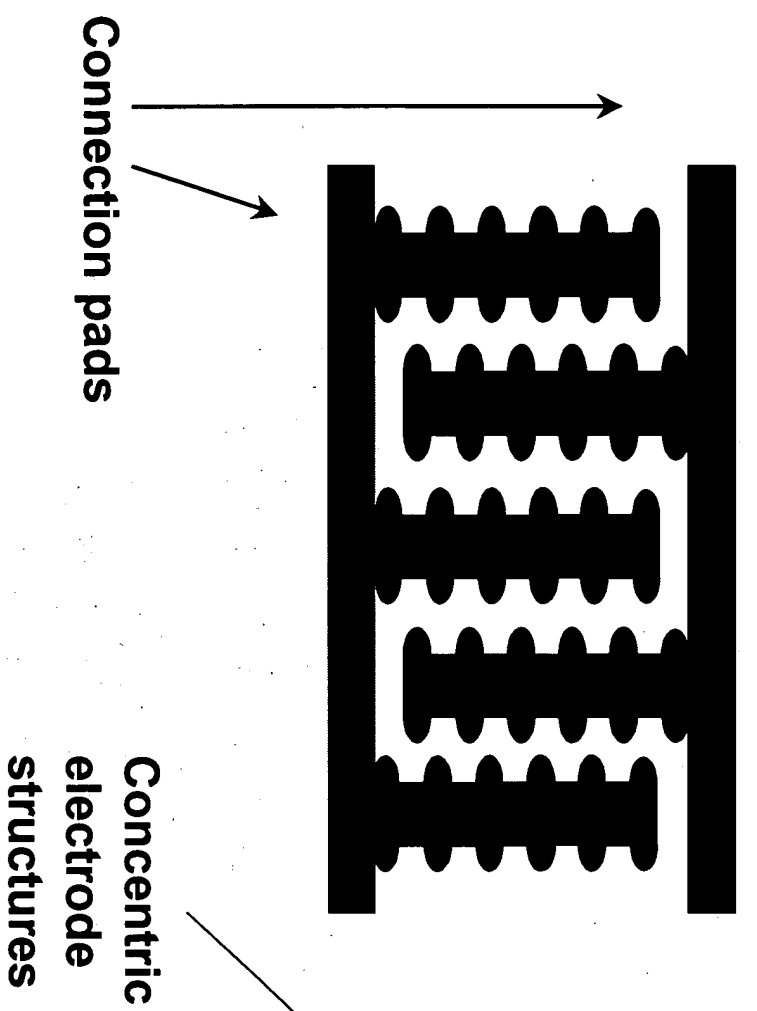


Figure 7E

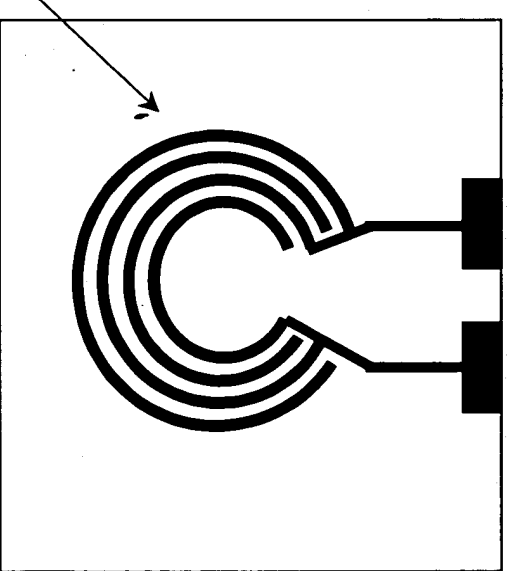
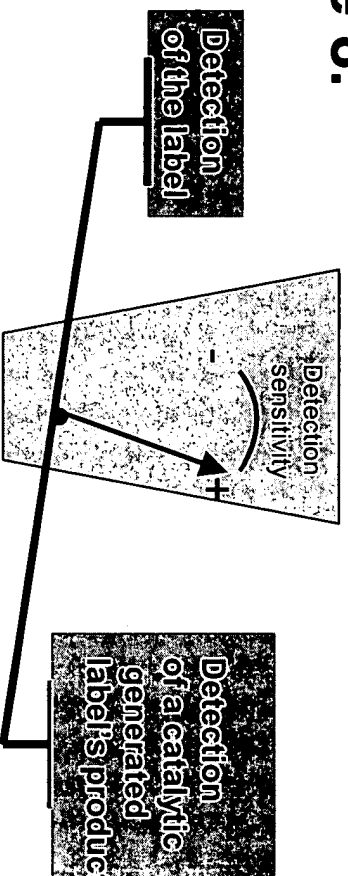


Figure 7F

Figure 8.



Signal amplification for improved detection sensitivity by indirect measuring catalytic products of enzyme-mediated reactions. Examples of enzymes commonly used include alkaline phosphatase (AP) and horseradish peroxidase (HRP). Here are some typical reactions used.

Enzyme	Reagents	Reaction
HRP	4-chloro-1-naphthol (4CN)	Oxidized products form purple precipitate
HRP	3,3'-diaminobenzidine (DAB, with or without NiCl_2)	Forms dark brown precipitate
HRP	3,3',5,5'-tetramethylbenzidine (TMB)	Forms dark purple stain
AP	5-bromo-4-chloro-3-indolyl phosphate (BCIP) /nitroblue tetrazolium (NBT)	BCIP hydrolysis products indigo precipitate after oxidation with NBT; reduced NBT precipitates, dark blue-gray stain results

Figure 9.

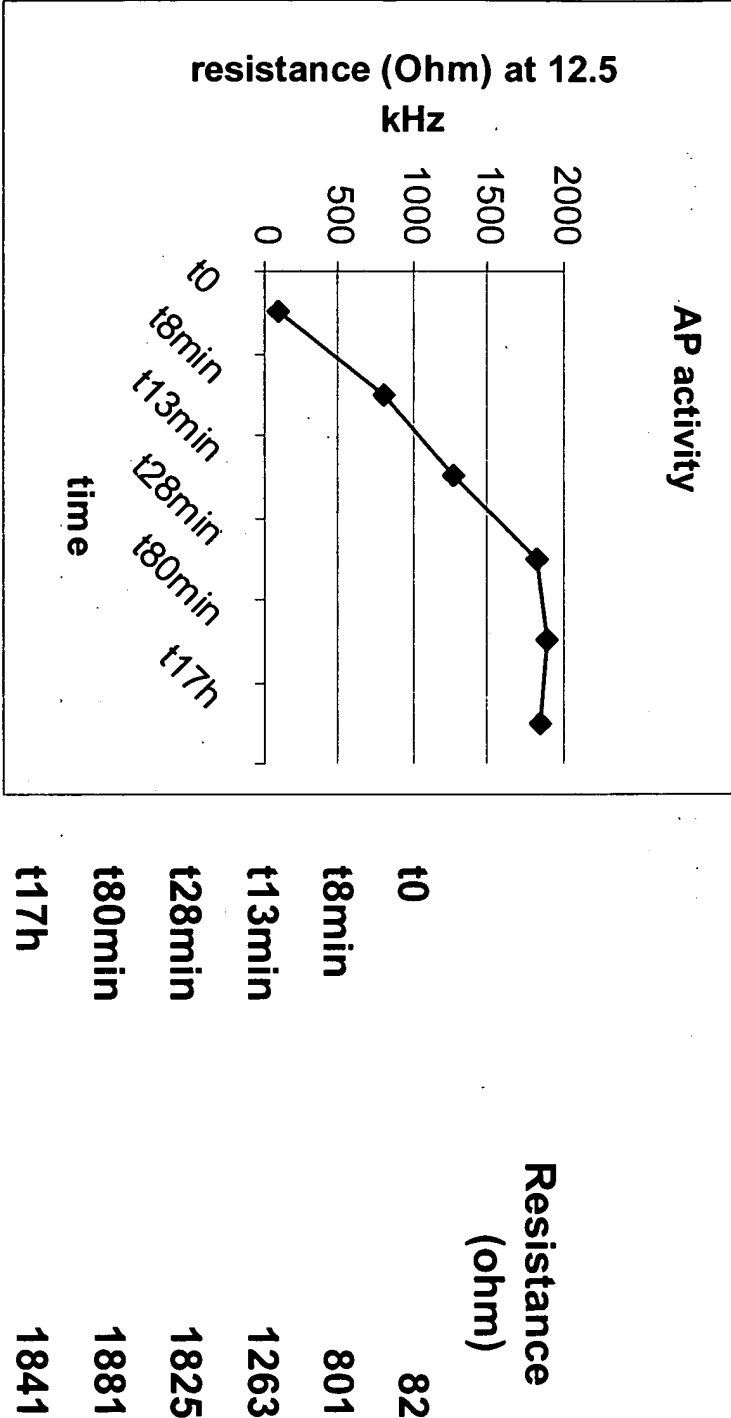
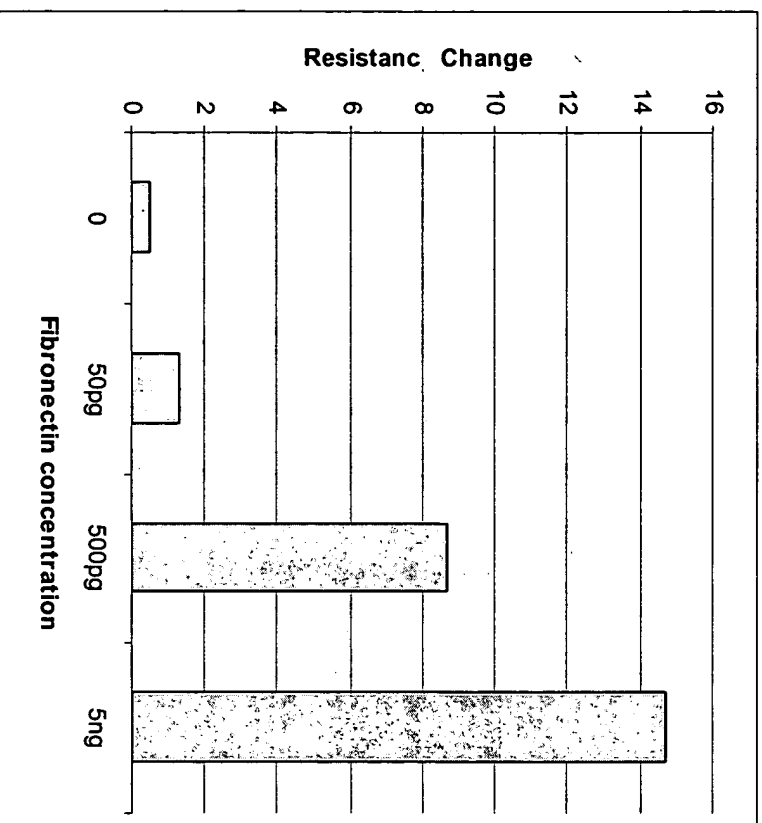


Figure 10.



Fibronectin	Resistance Fold Change
0	0.49
50pg	1.28
500pg	8.66
5ng	14.67

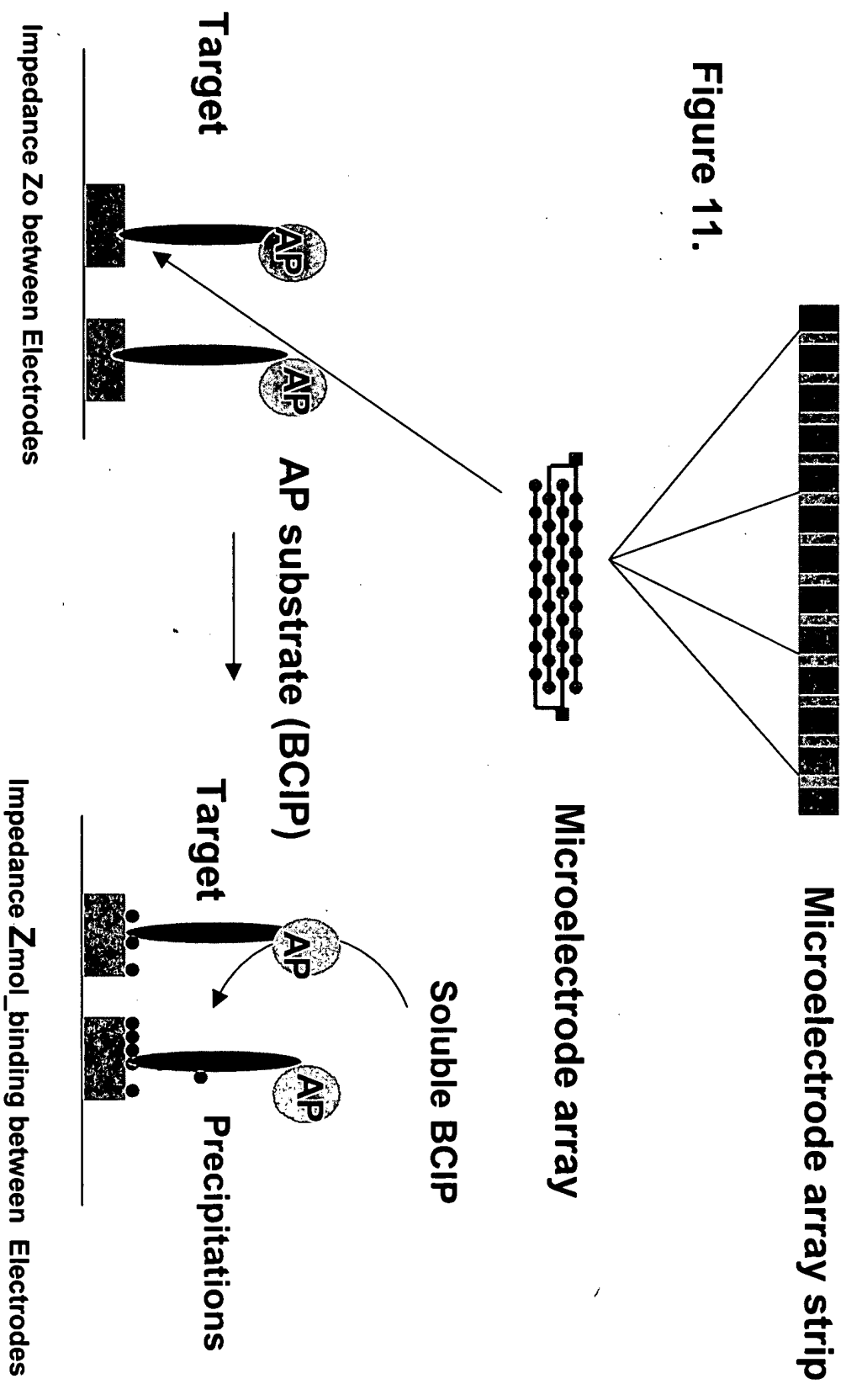


Figure 11.

Figure 12 A

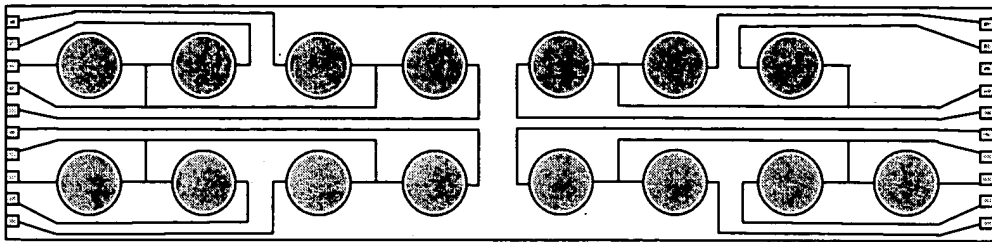


Figure 12 B

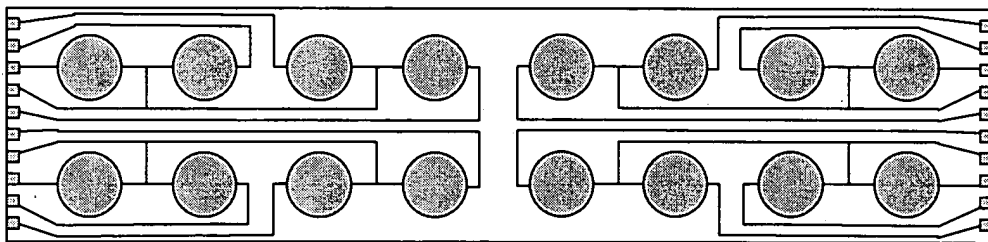


Figure 12 C

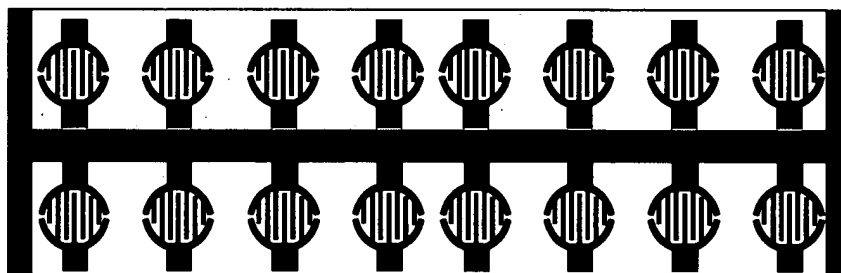
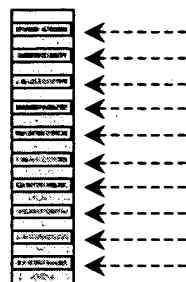


Figure 13 A



Electronic conductor lines

Figure 13 B

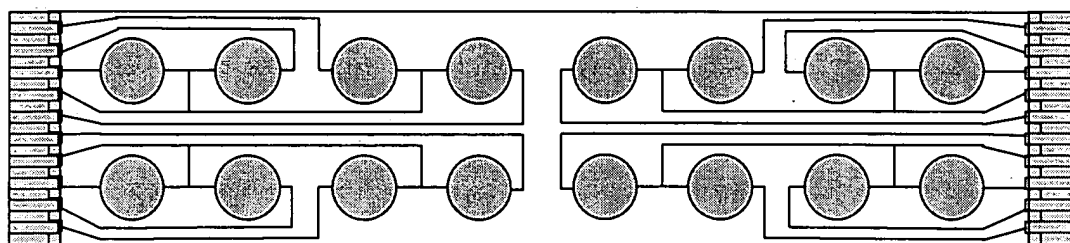


Figure 13 C

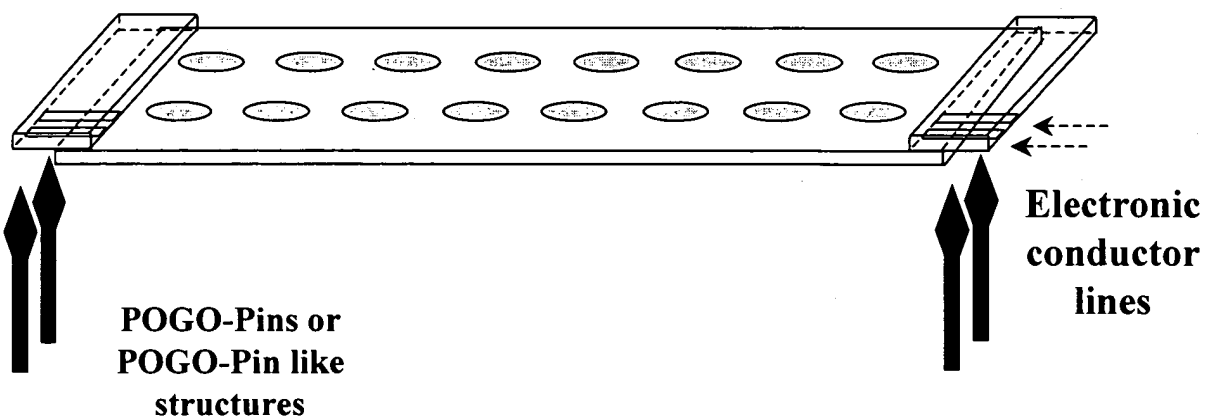


Figure 14 A

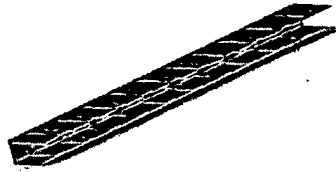


Figure 14 B

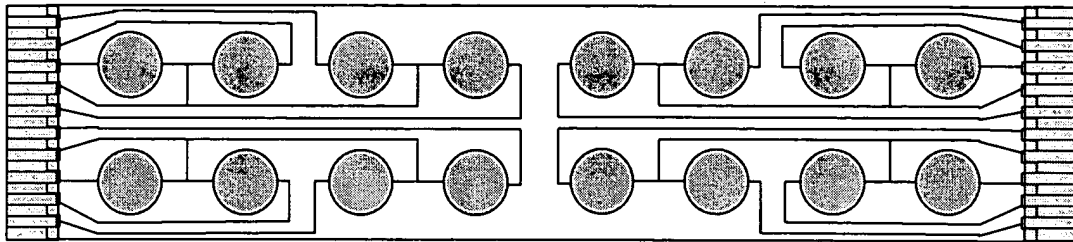


Figure 14 C

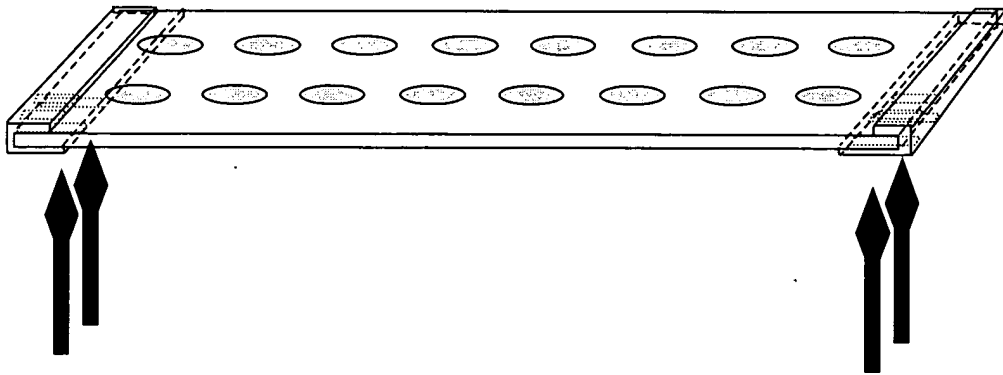


Figure 14 D

Metal clip type A



Figure 14 E

Connection pads on substrate

Electrode structures

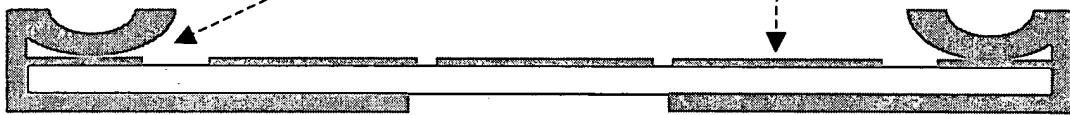


Figure 14 F

Metal clip type B

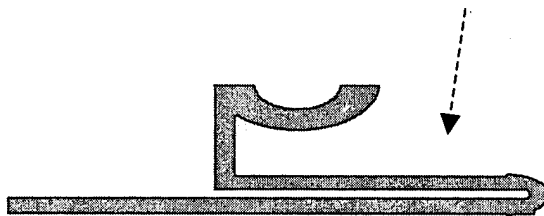


Figure 14 G

Connection pads on substrate

Electrode structures

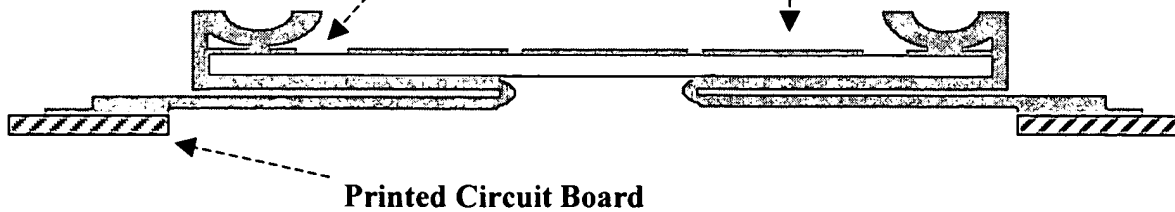


Figure 15(A)

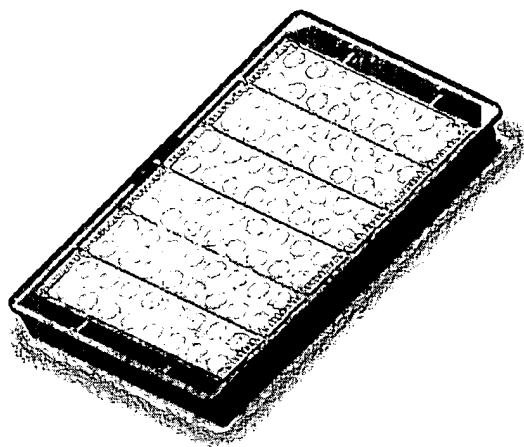


Figure 15(B)

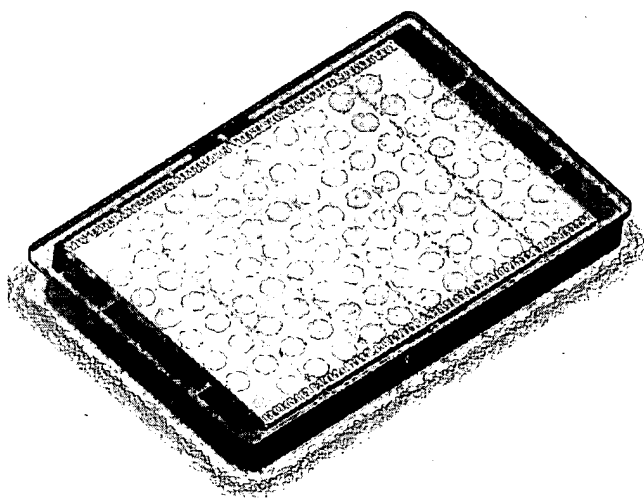
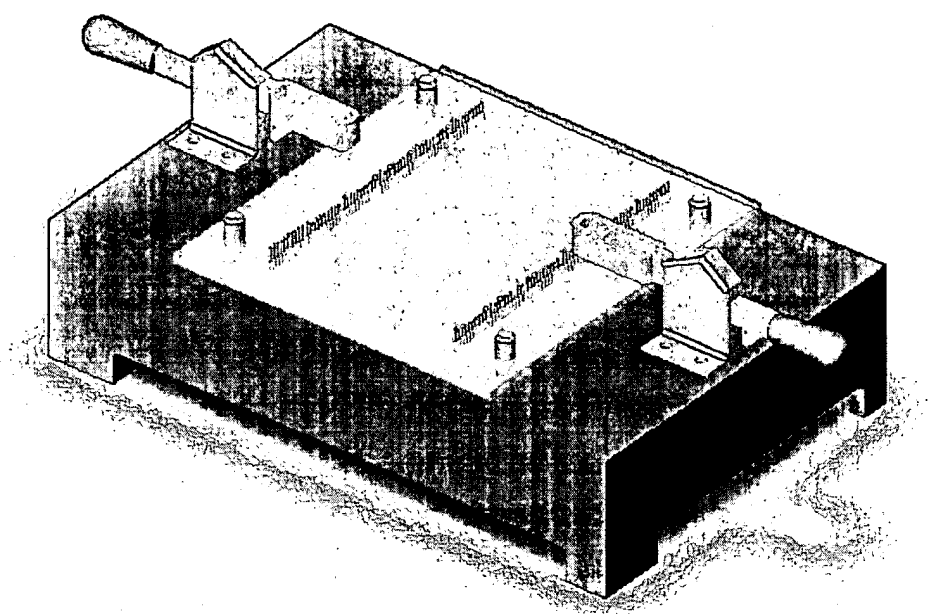


Figure 16.



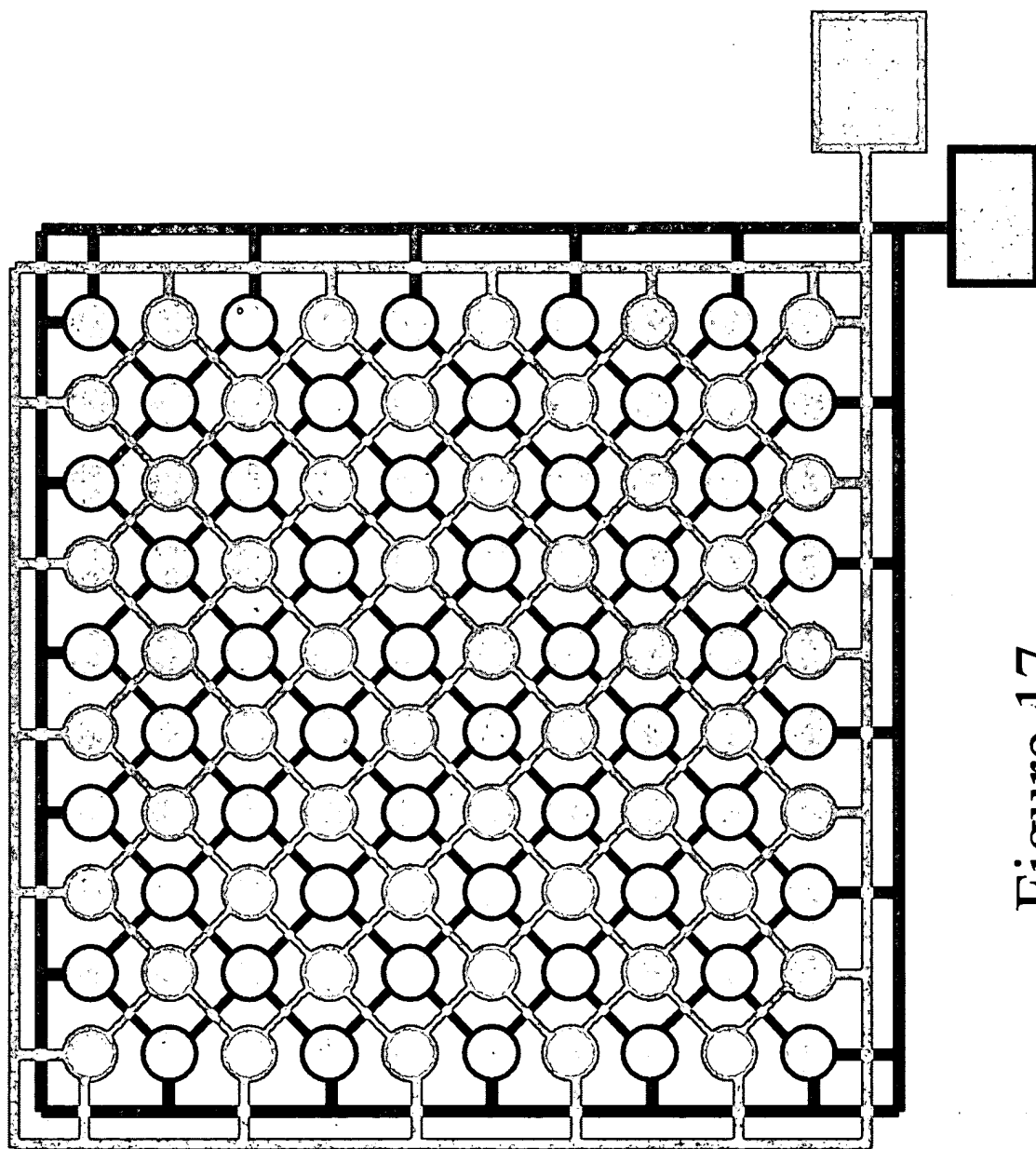


Figure 17

Figure 18

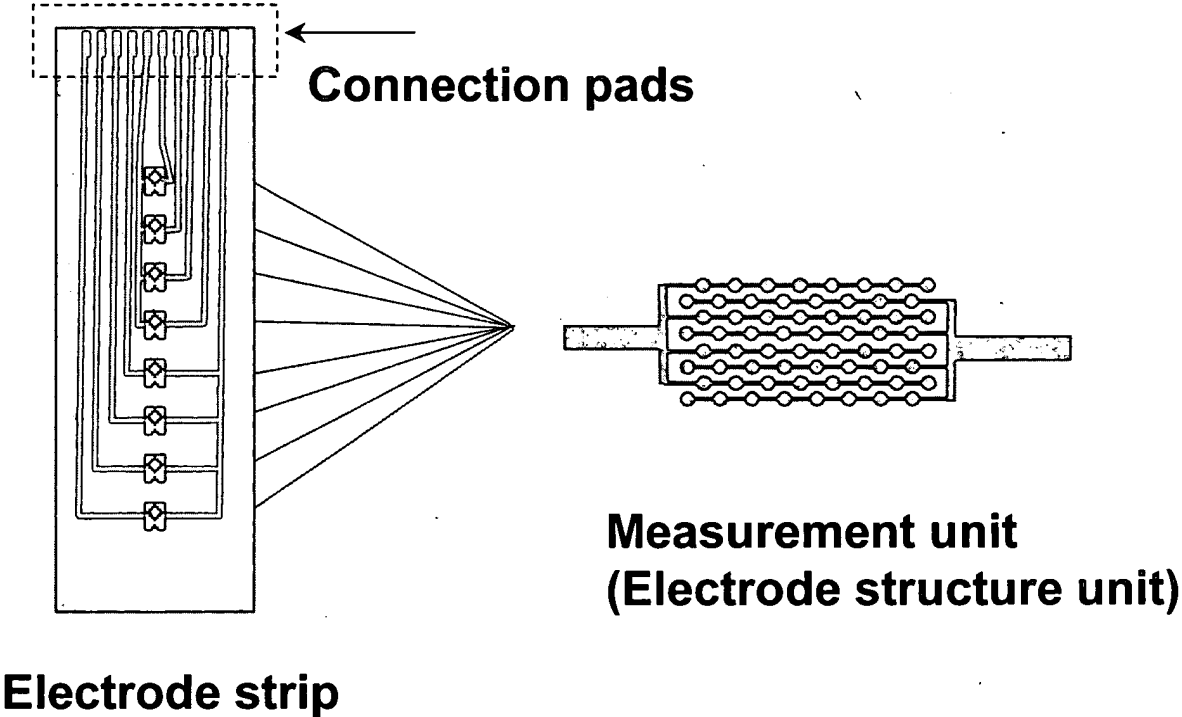


Figure 19

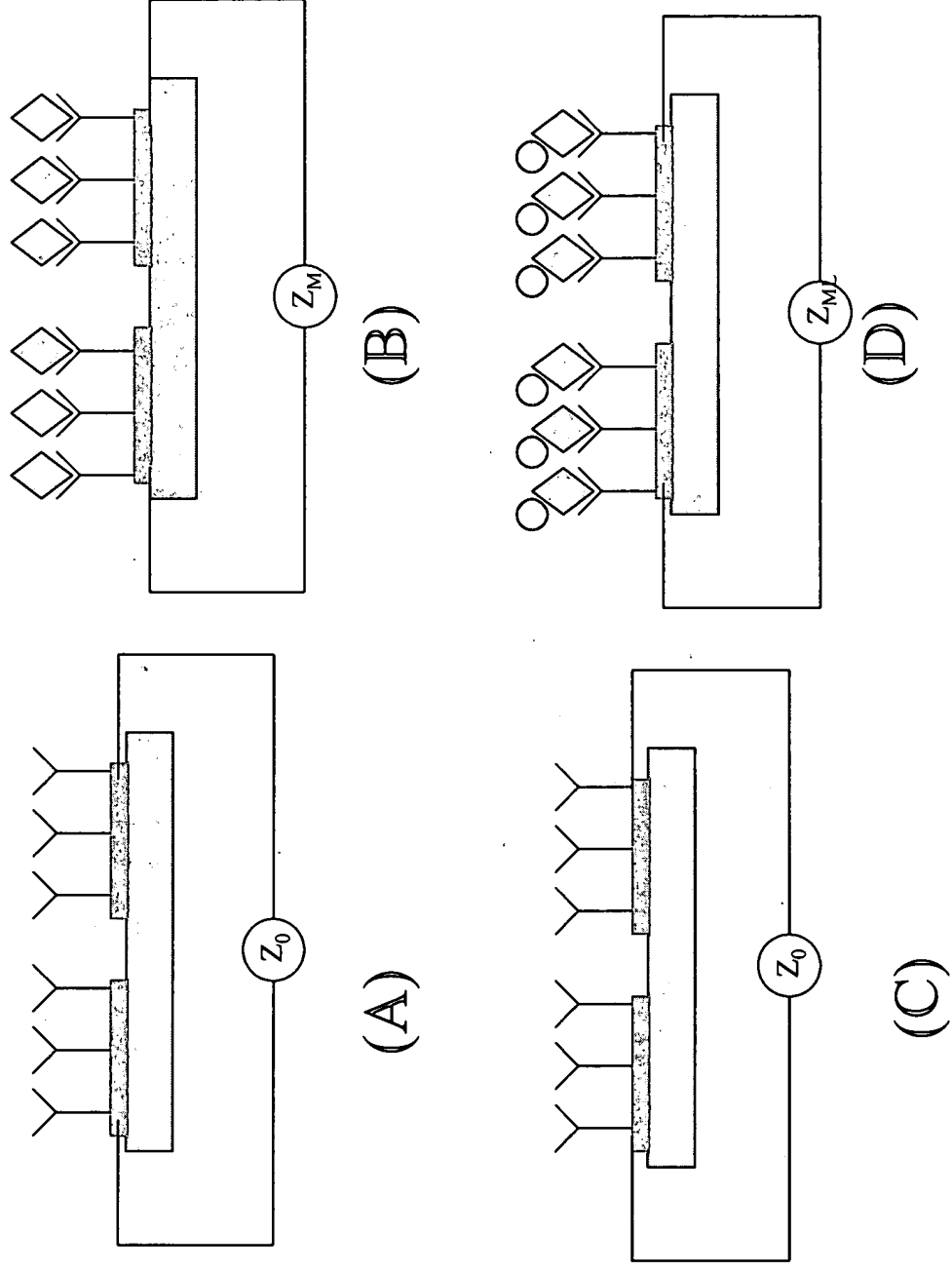
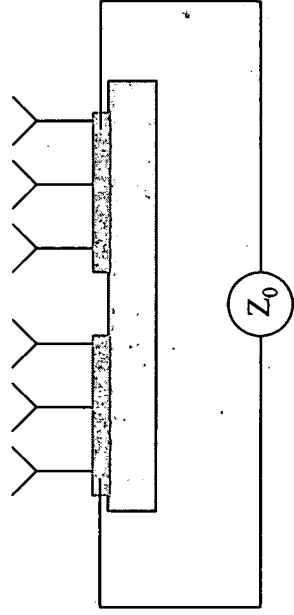
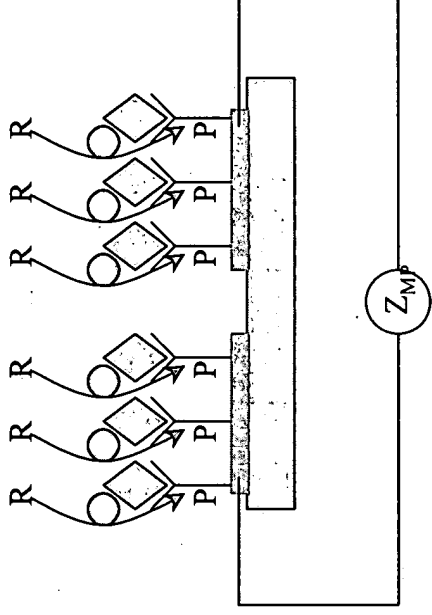


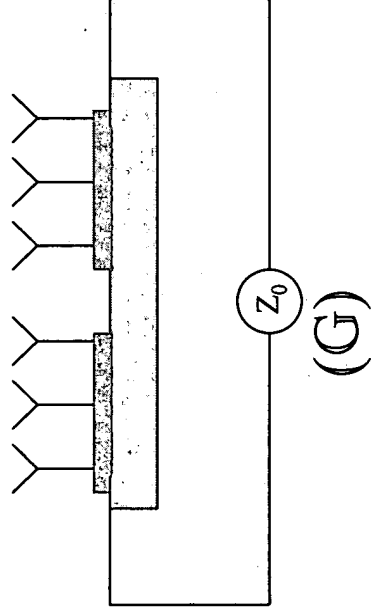
Figure 19



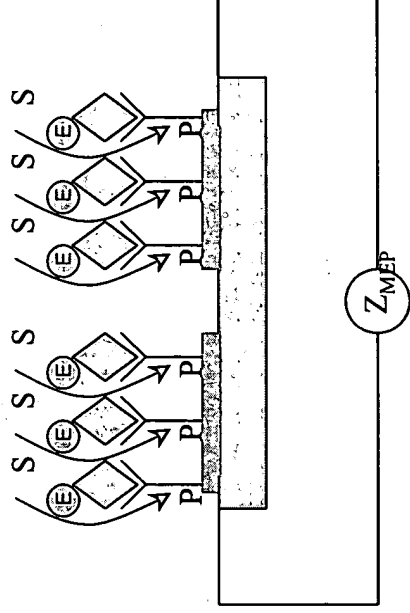
(E)



(F)



(G)



(H)

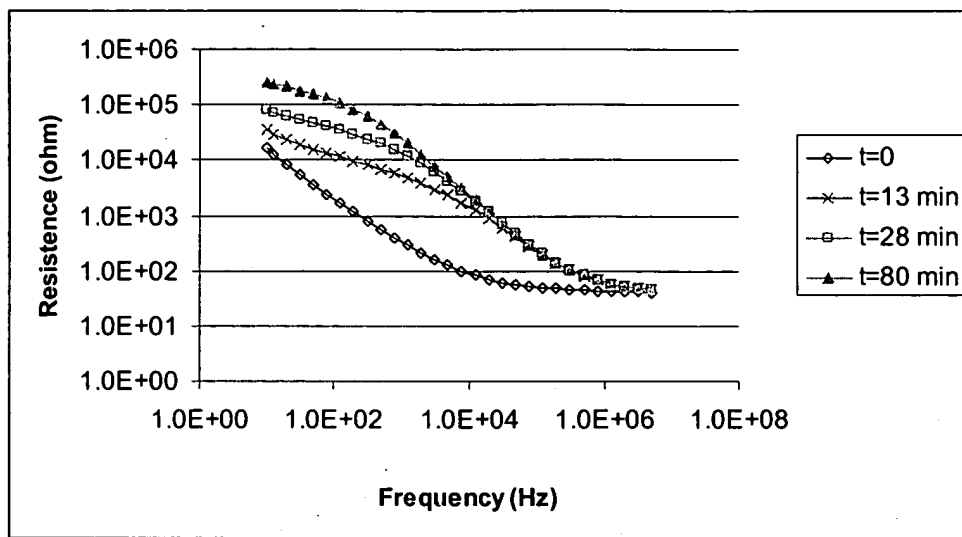


Figure 20 (A)

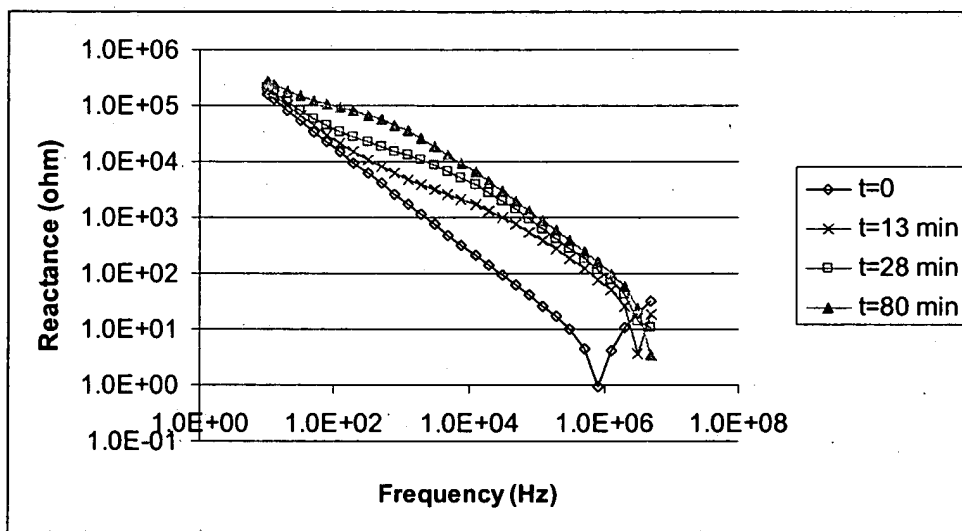


Figure 20 (B)

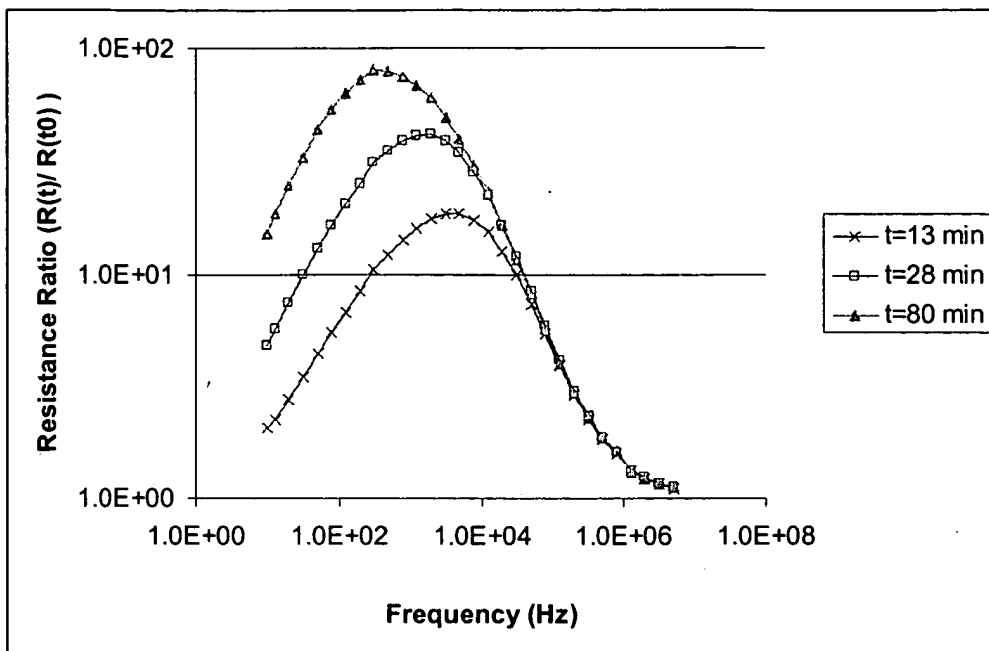


Figure 20(C)

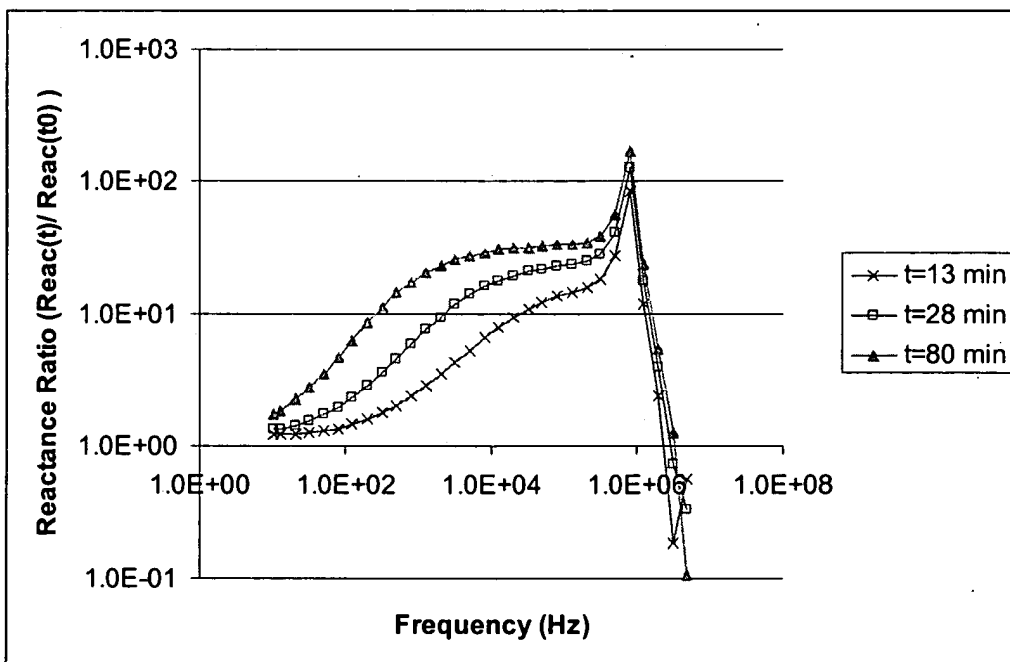


Figure 20(D)

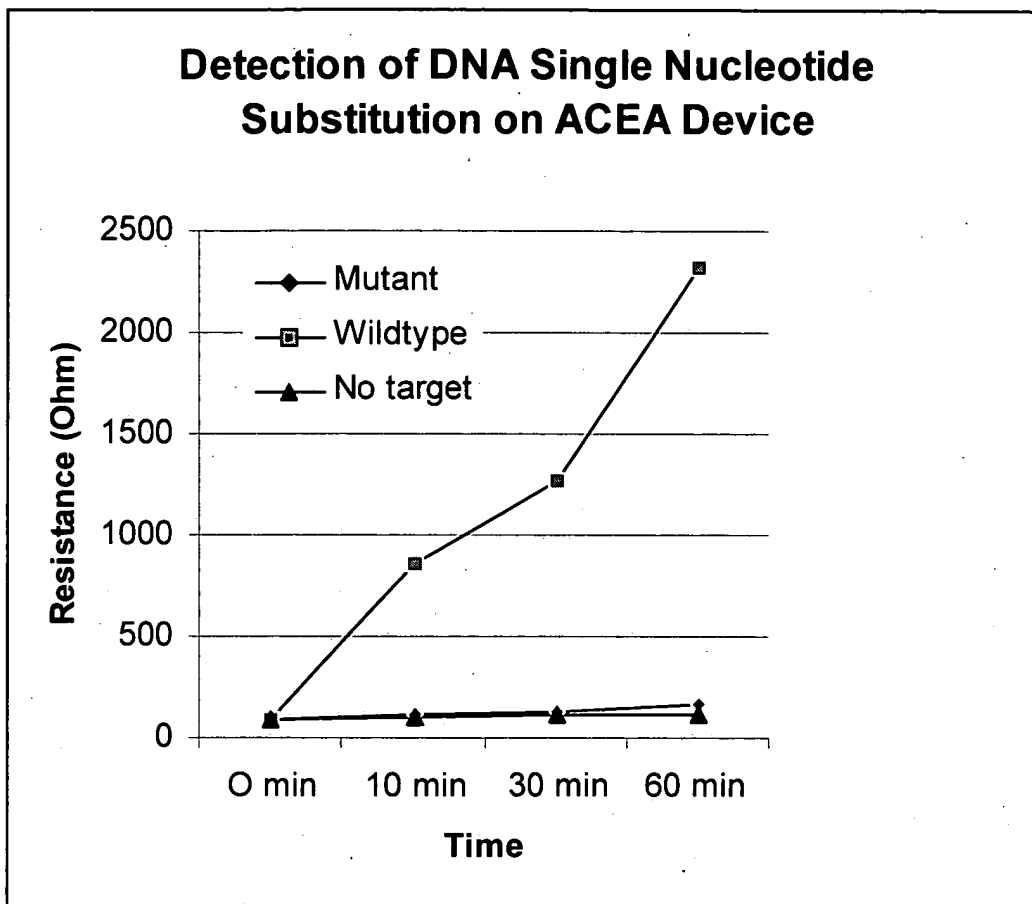
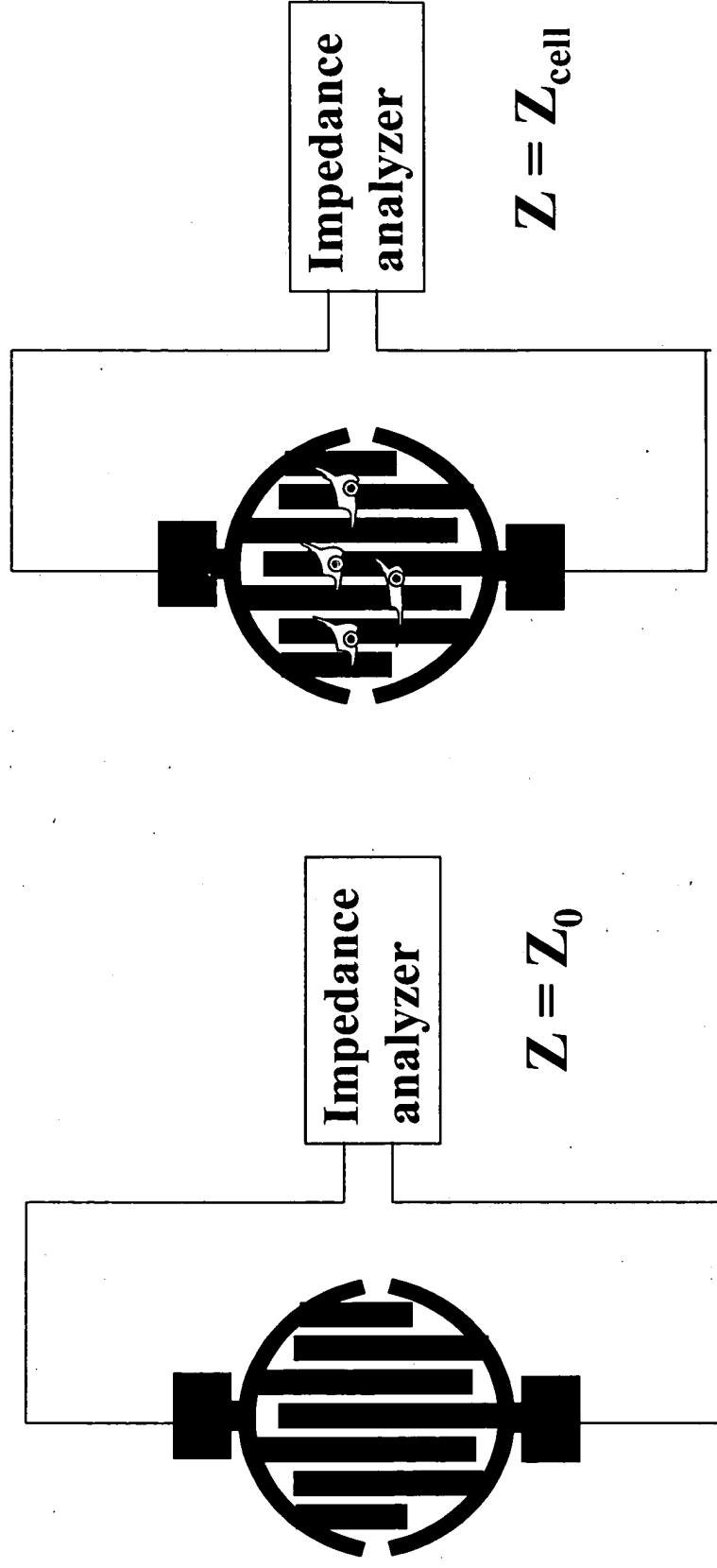


Figure 21.

Figure 22



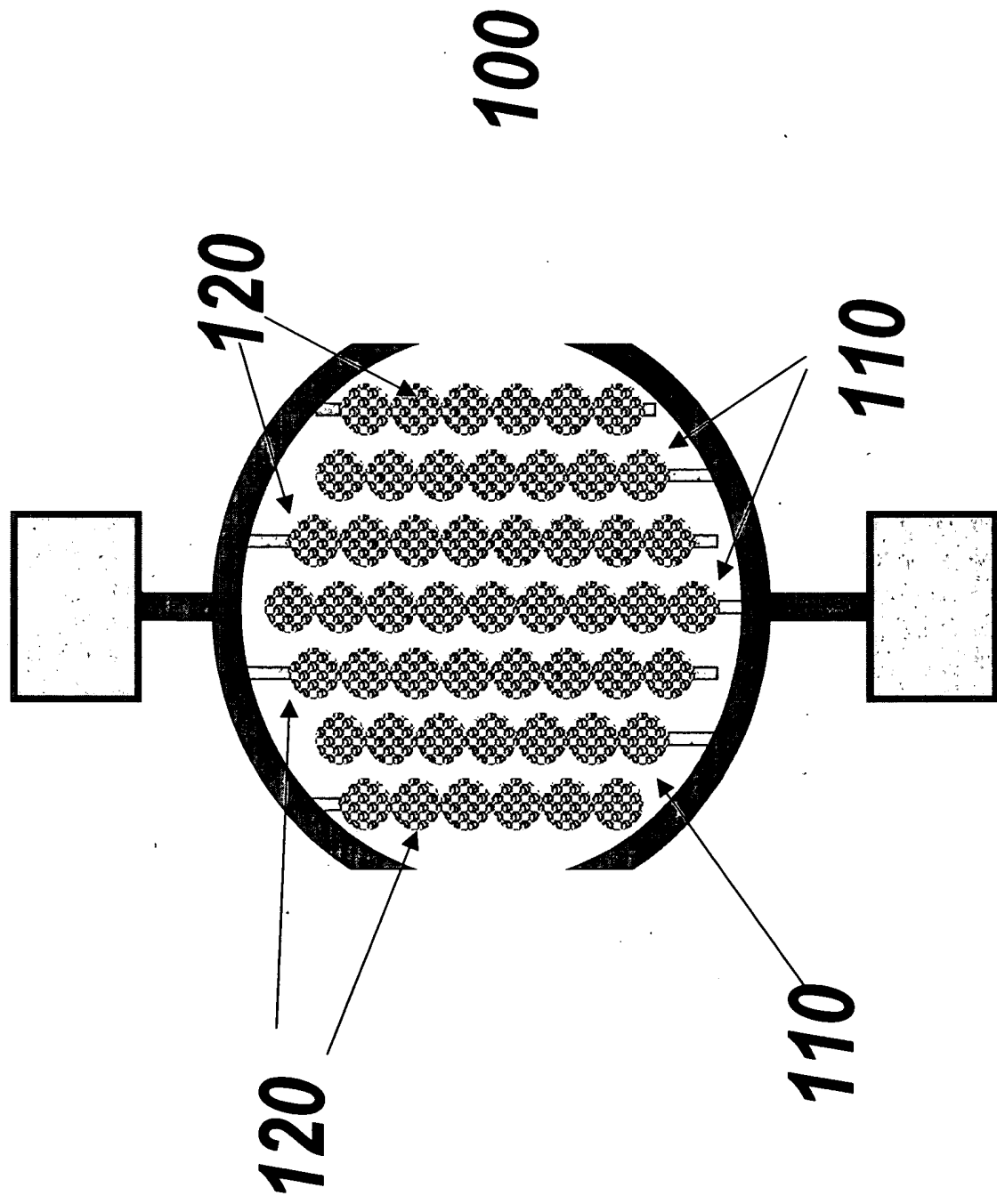


Figure 23

Figure 24

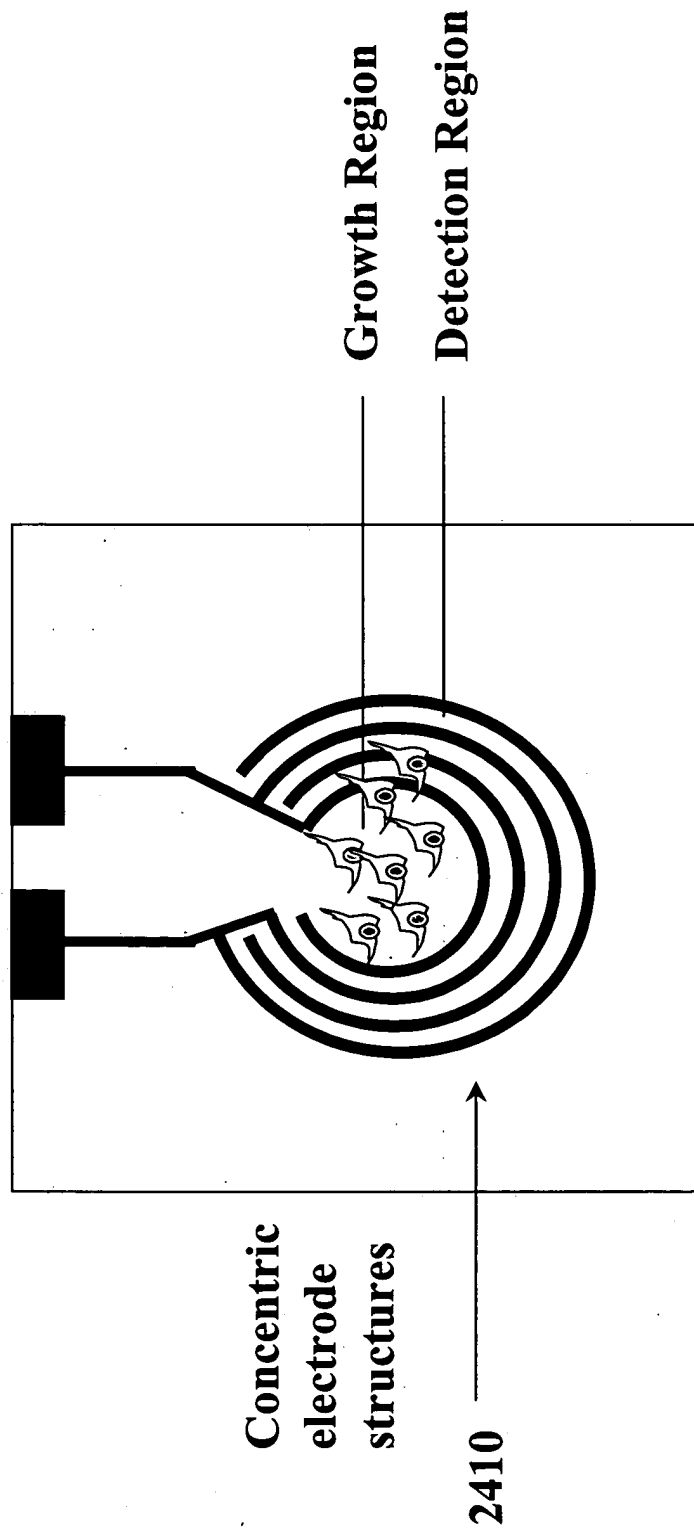


Figure 25

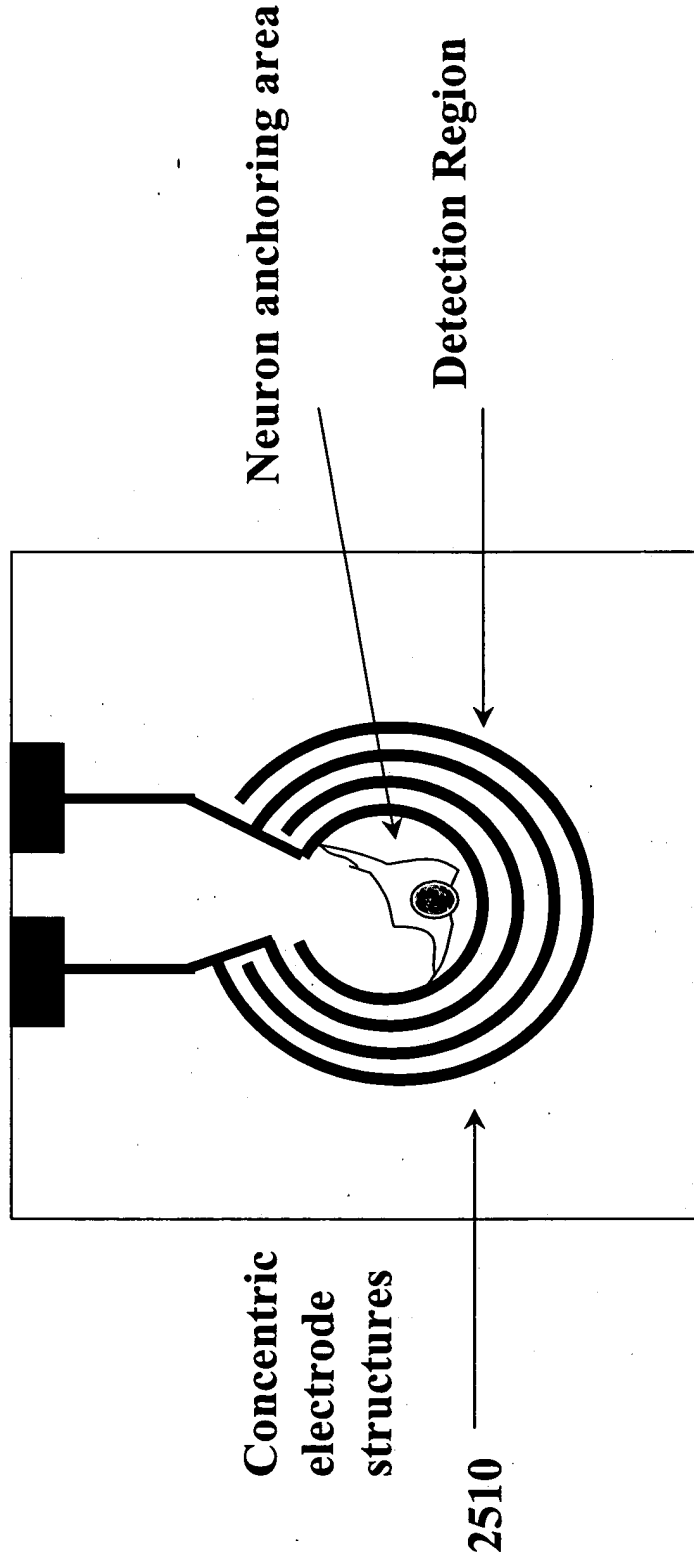


Figure 26A (1) 2AA

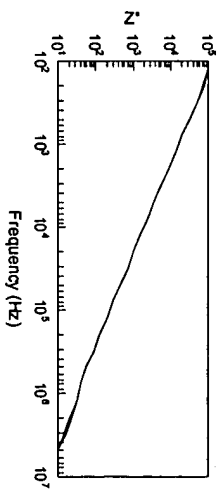
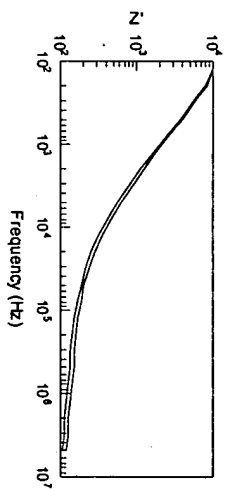
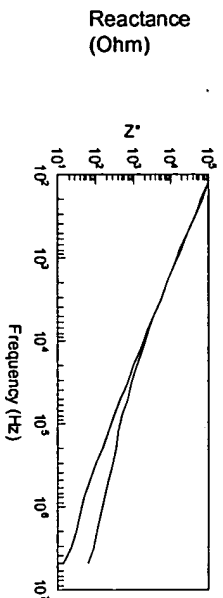
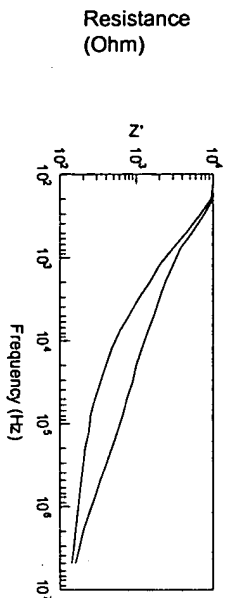
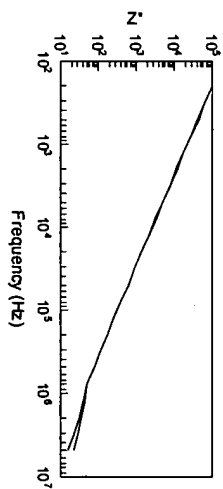
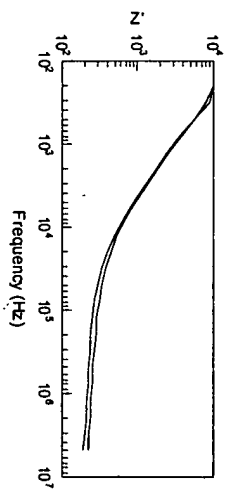
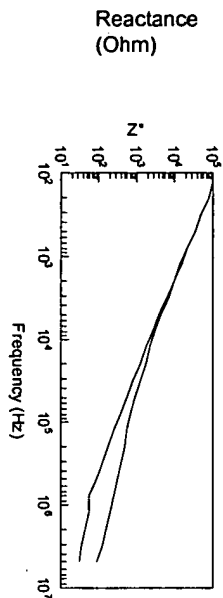
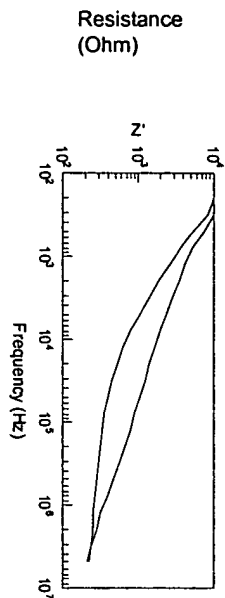
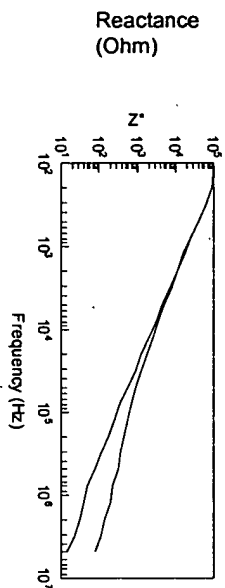
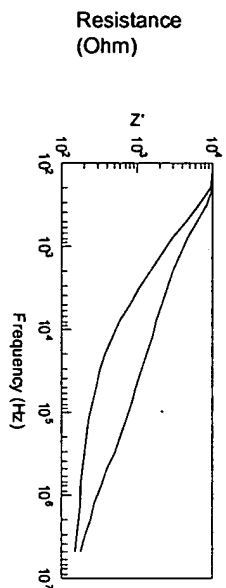
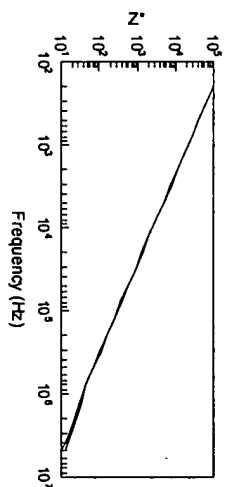
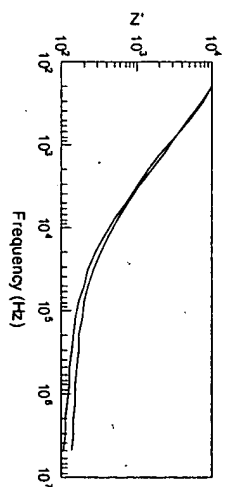


Figure 26A (2)

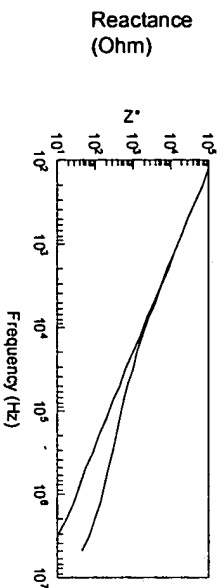
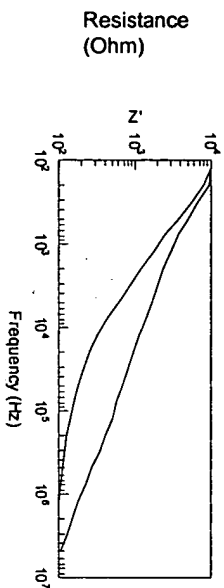
ZAC



ZAC No Cells attached



ZAD



ZAD (No cells attached)

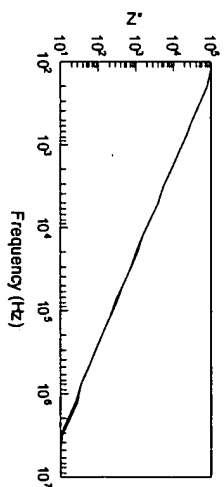
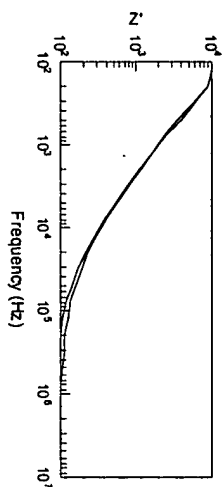


Figure 26A (3)
3A

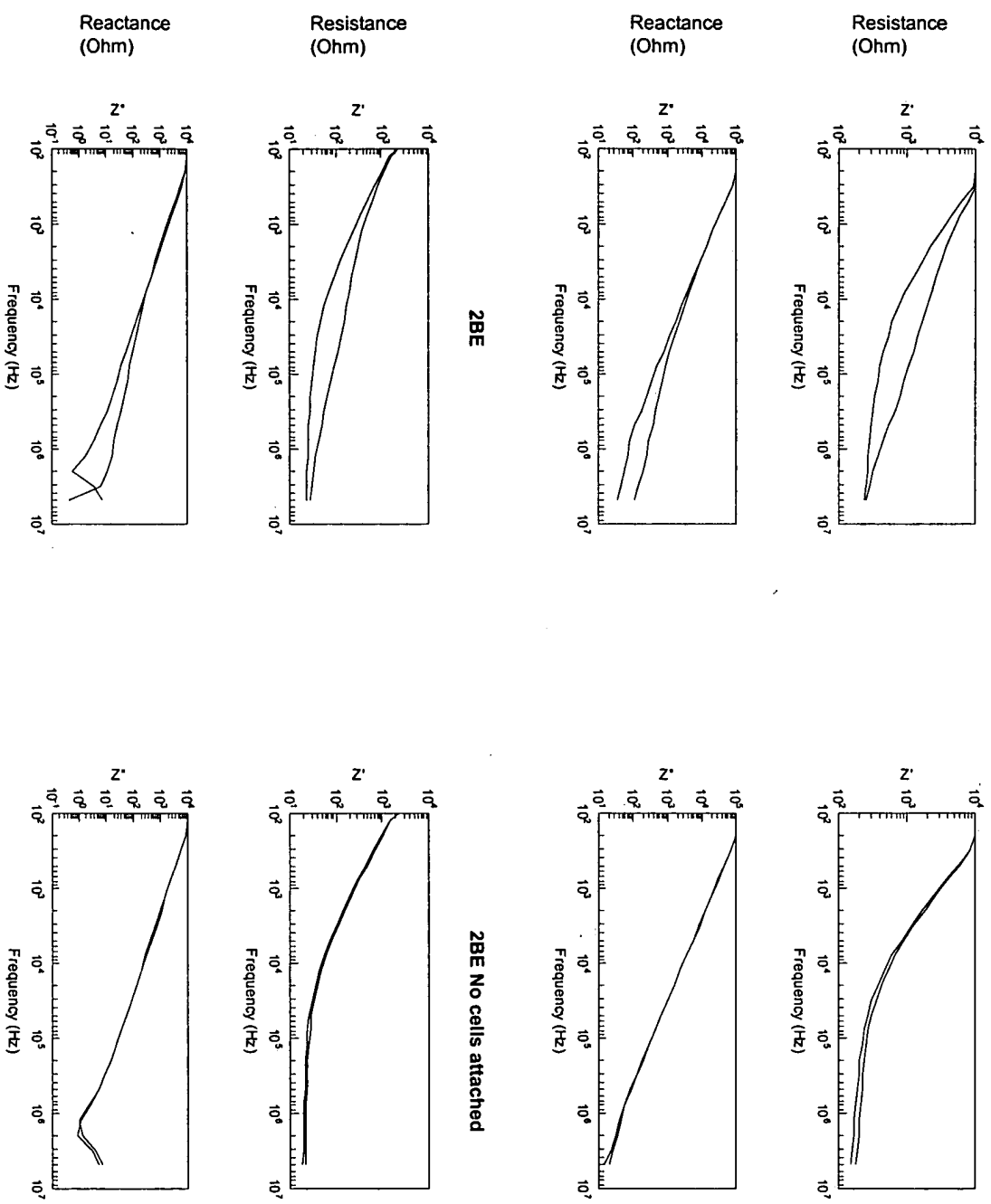
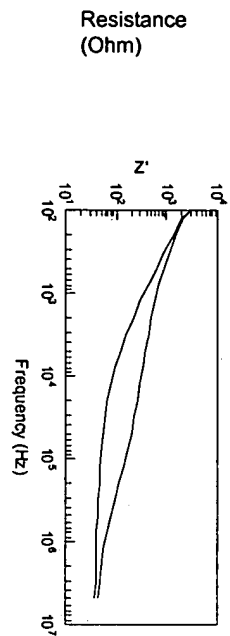
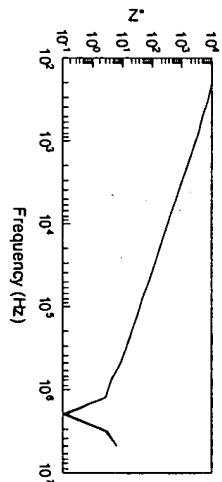
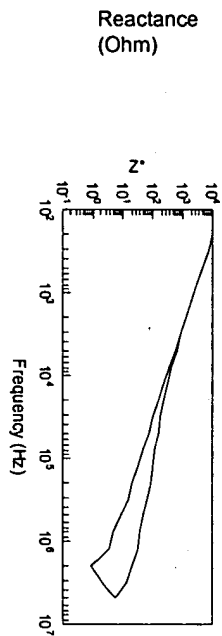
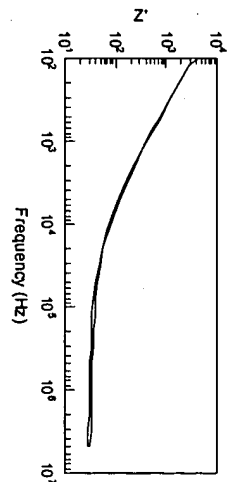


Figure 26A (4)

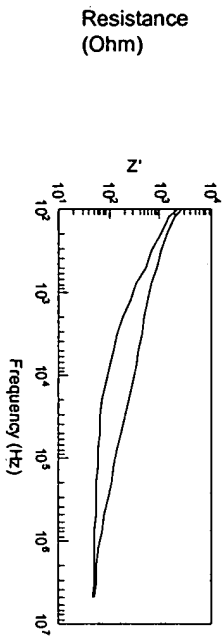
3B



3B No cells attached



3C



3C No cells attached

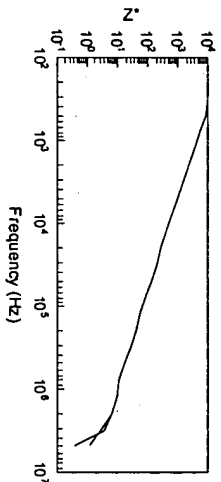
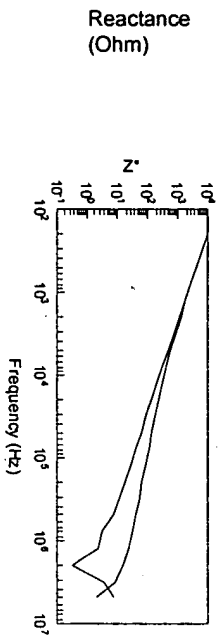
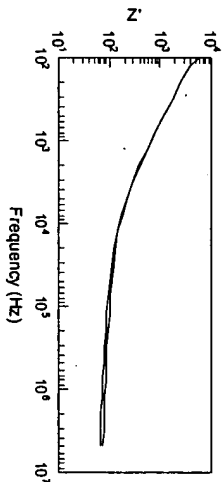


Figure 26B

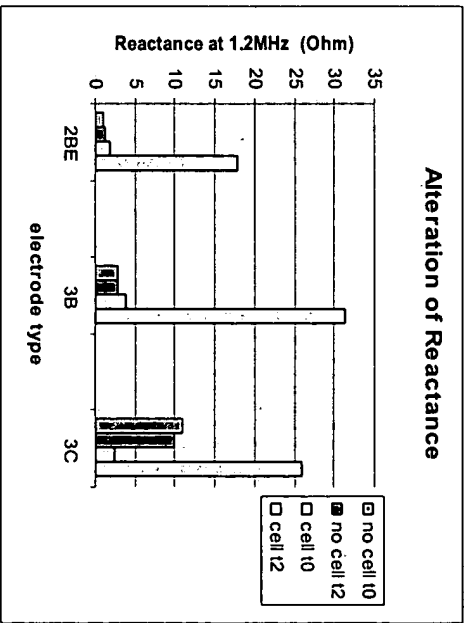
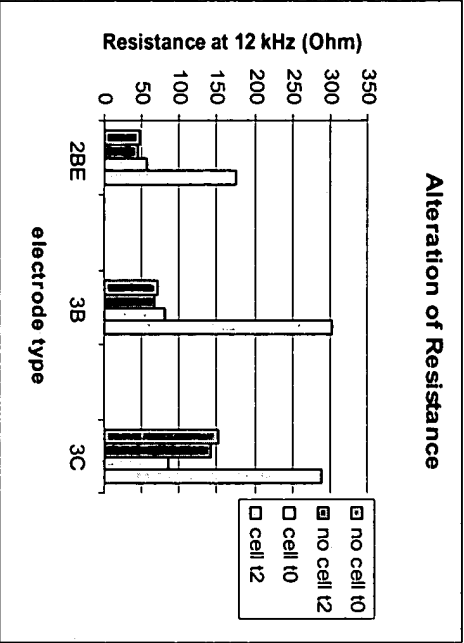
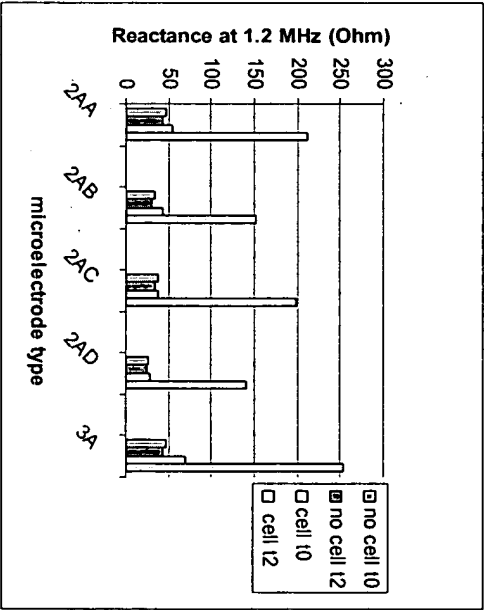
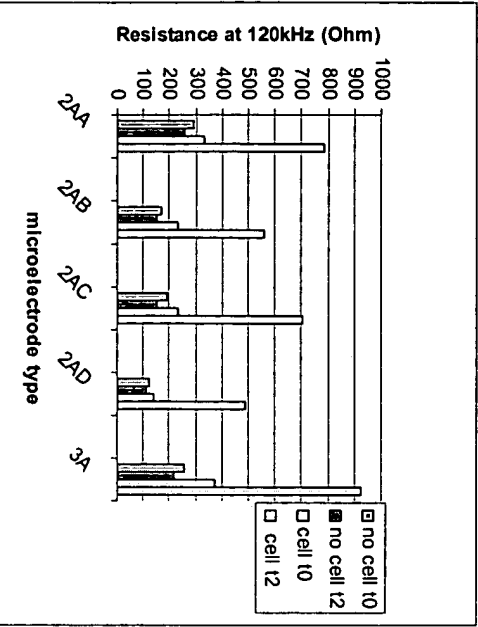


Figure 27

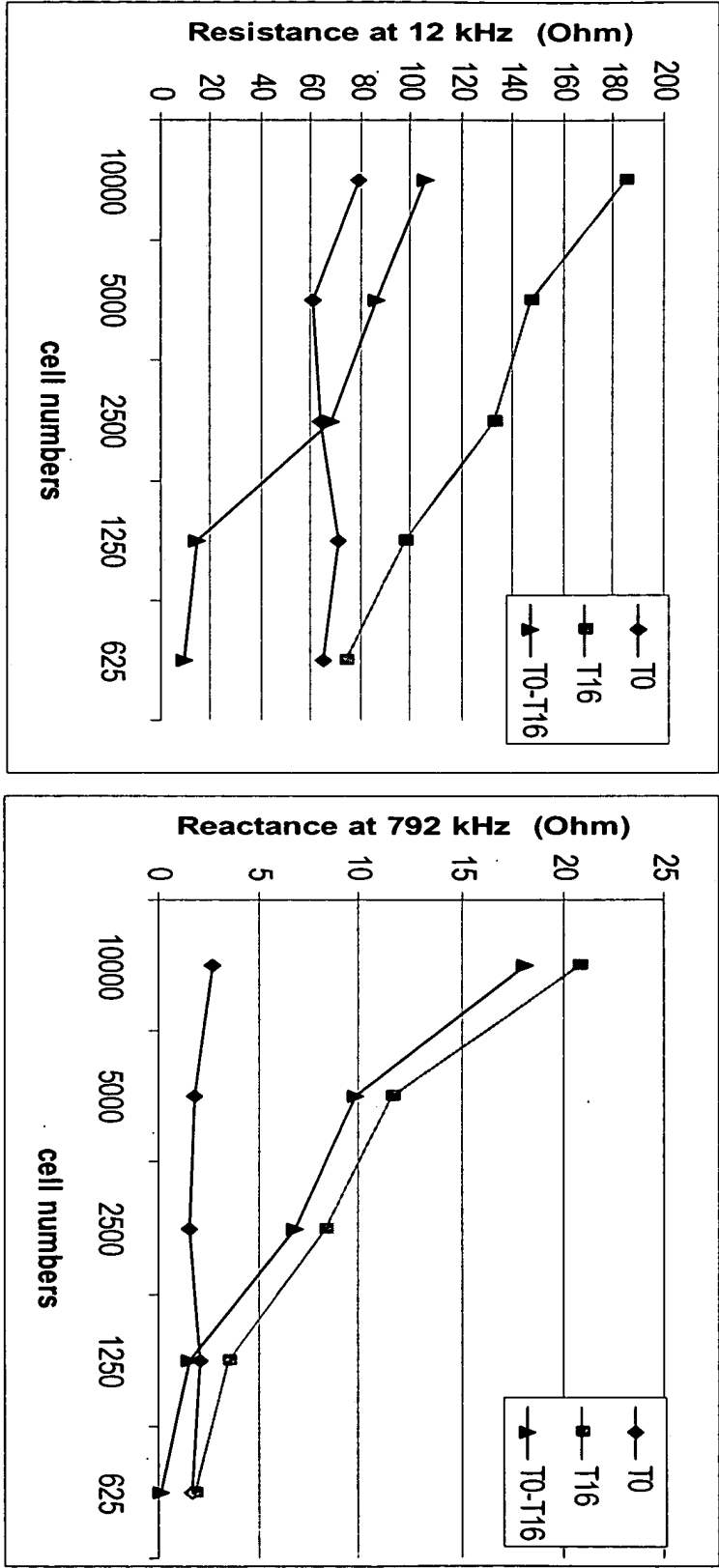


Figure 28

NIH 3T3 and PAE Cell Proliferation

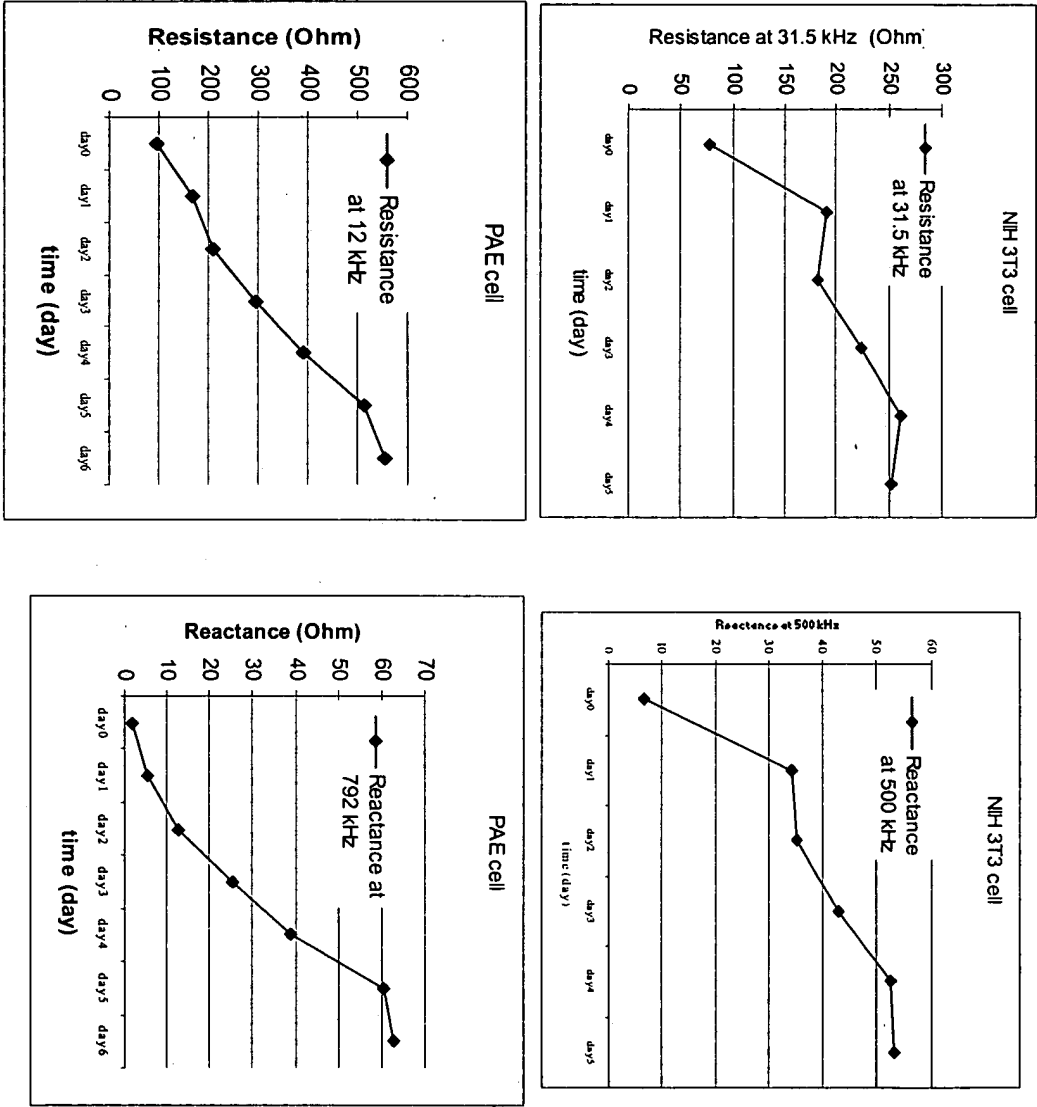


Figure 29

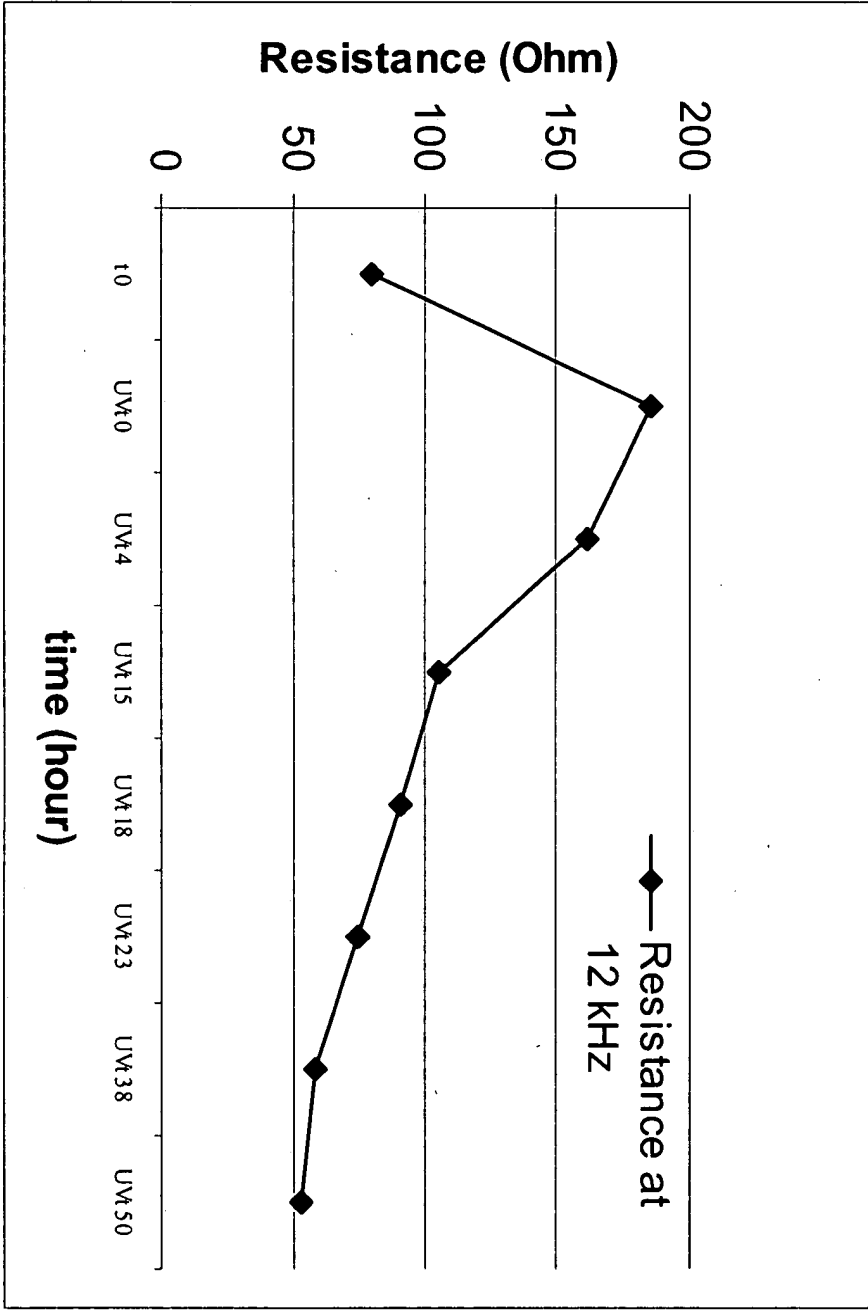


Figure 30

Tamoxifen IC50s at different time intervals (NIH 3T3 Cell line)

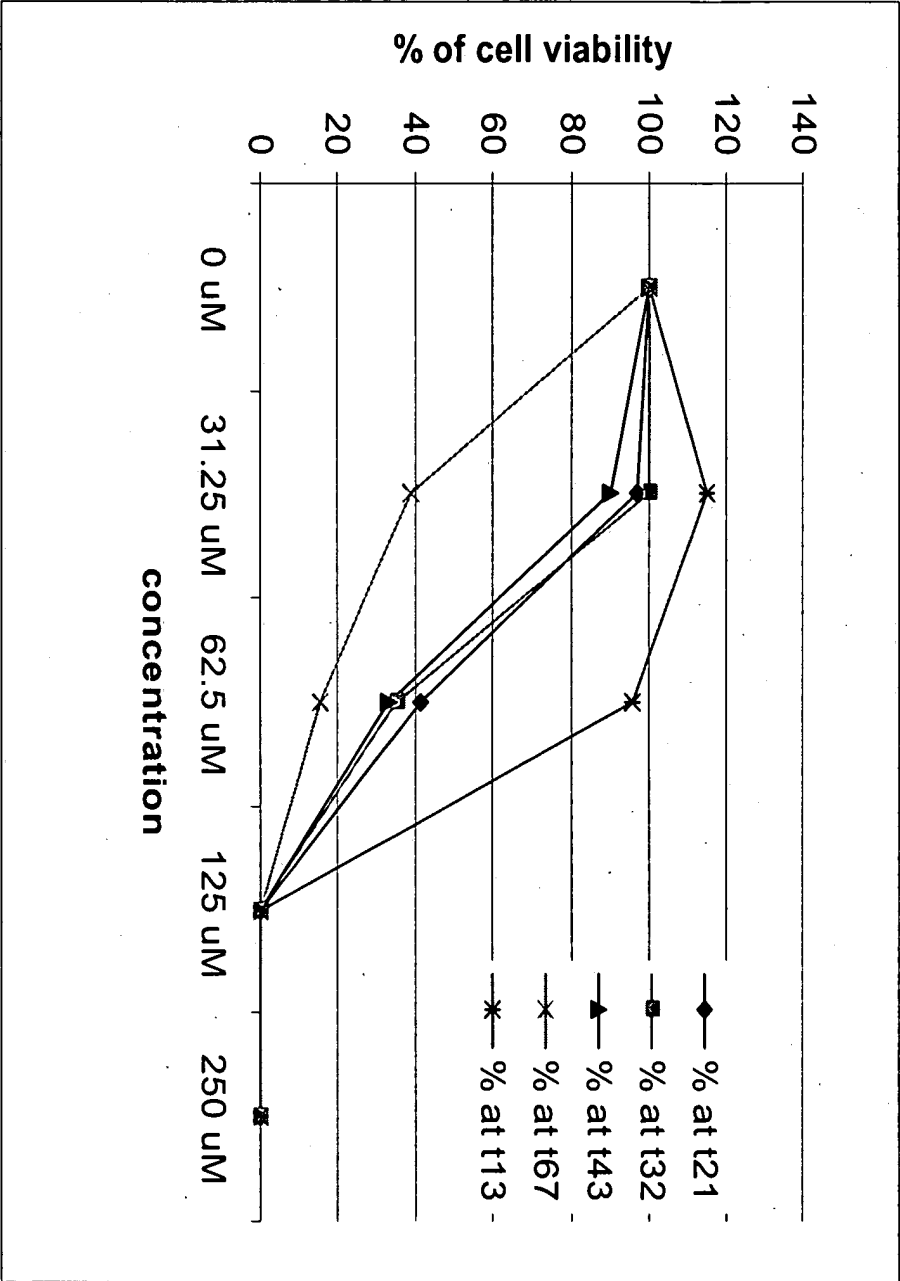


Figure 31

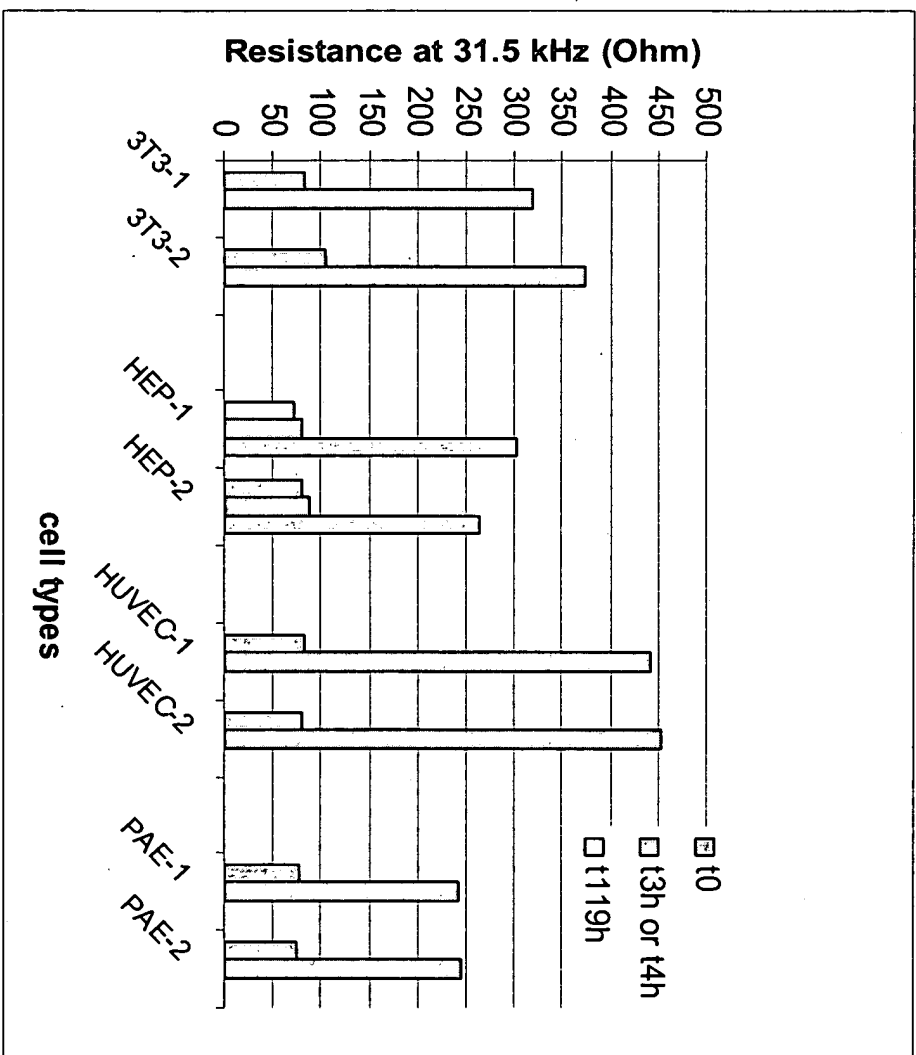


Figure 32

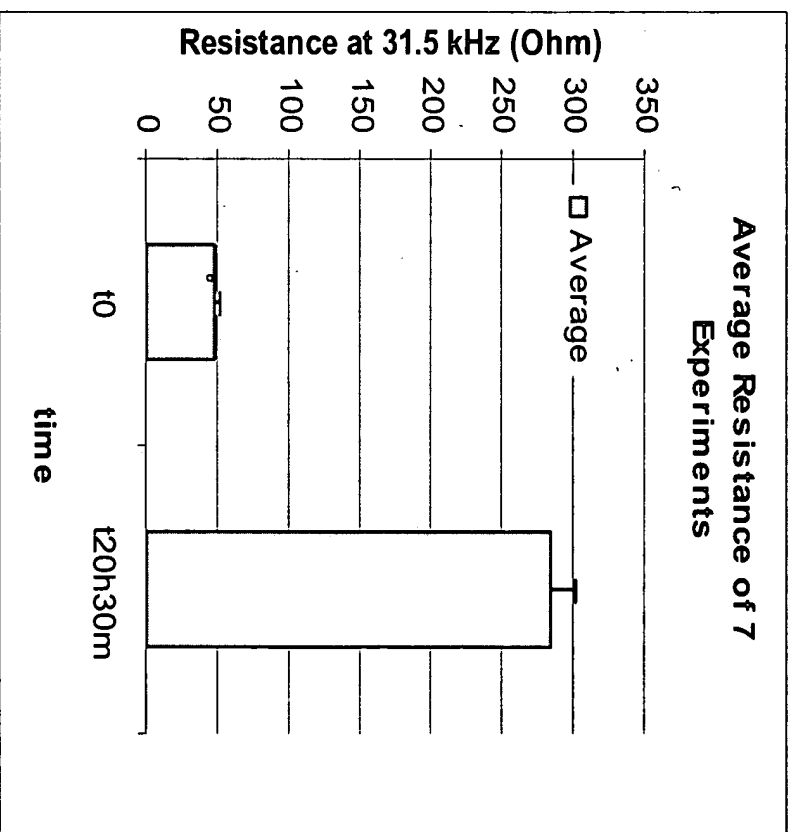
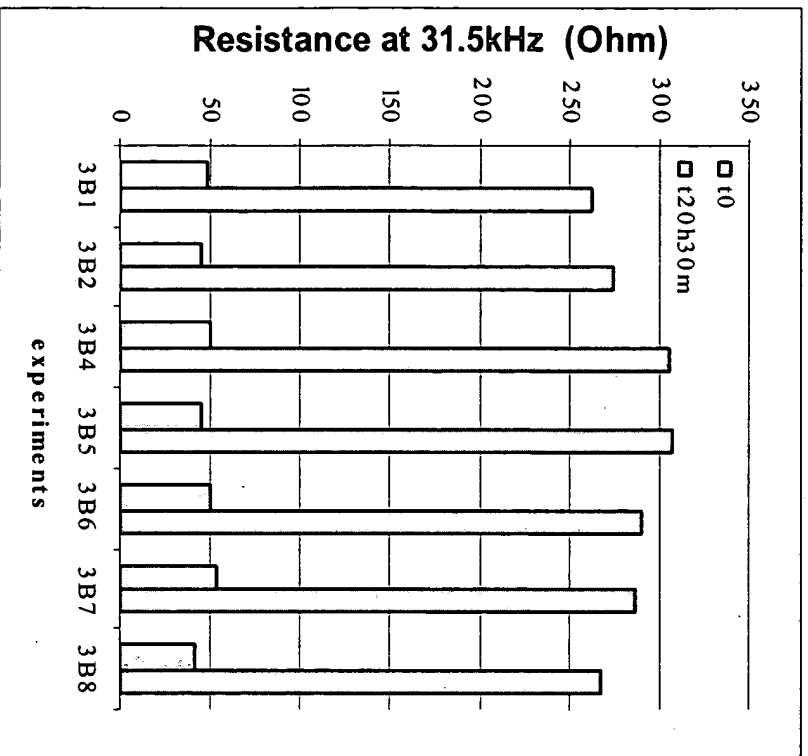


Figure 33.

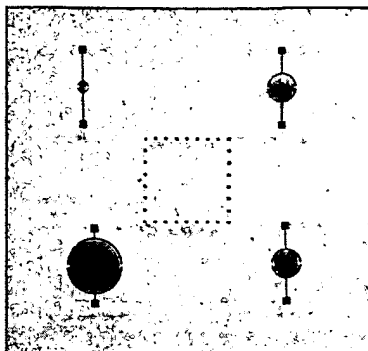


Figure 34.

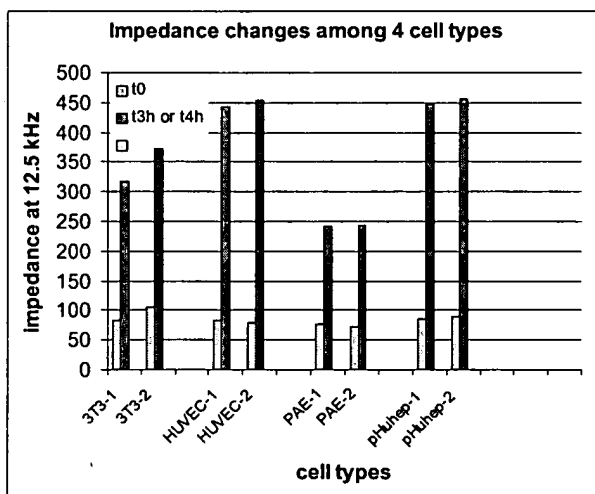


Figure 35.

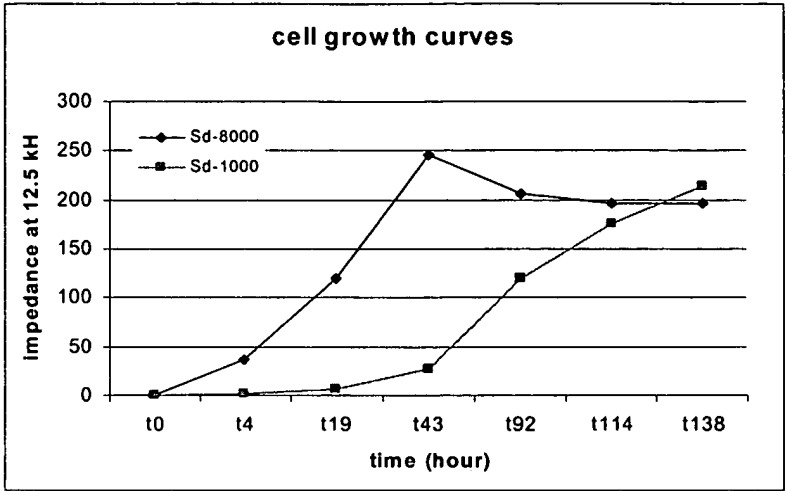


Figure 36.

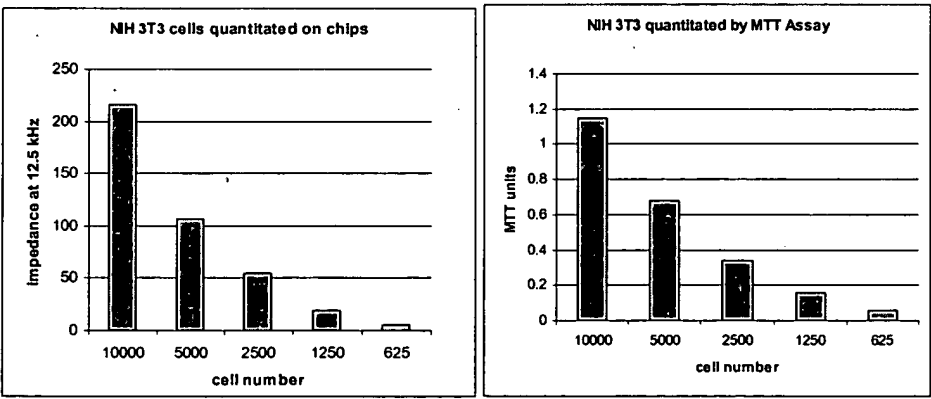


Figure 37.

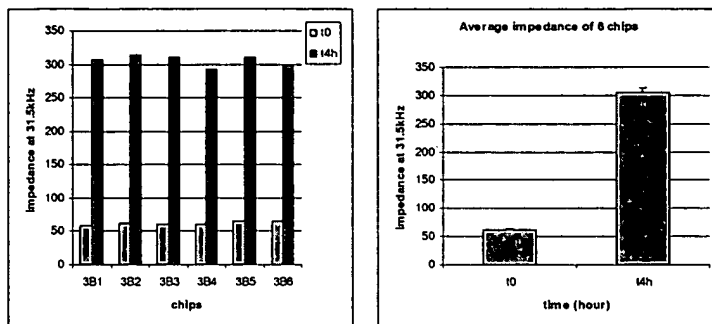


Figure 38(A).

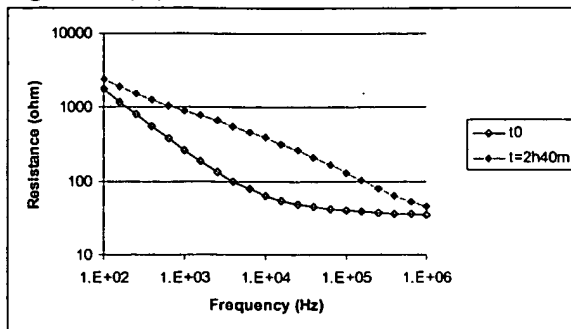


Figure 38(B)

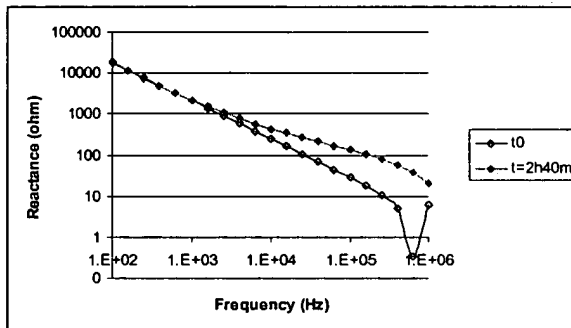


Figure 38(C)

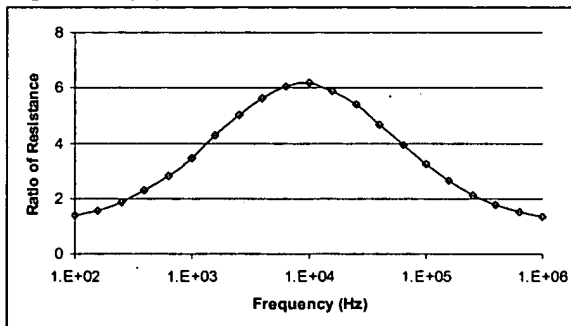


Figure 38(D)

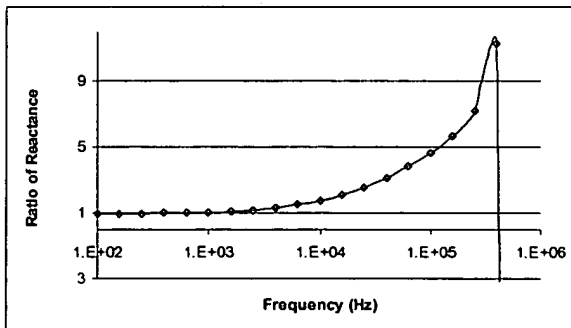


Figure 39(A)

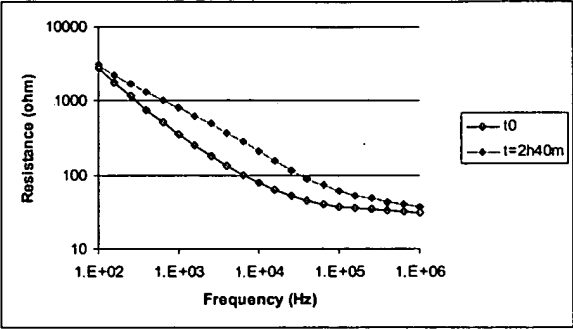


Figure 39(B)

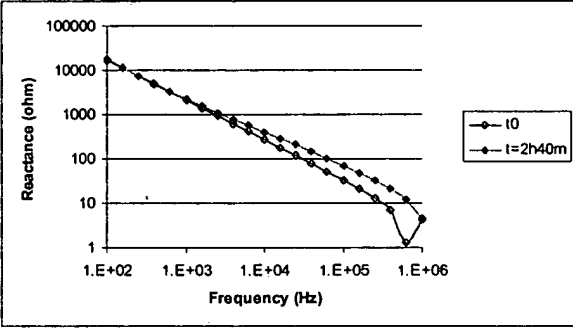


Figure 39(C)

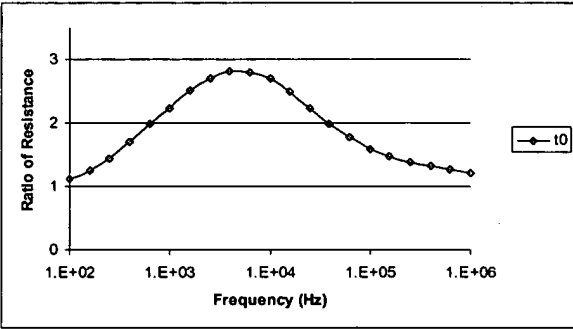


Figure 39(D)

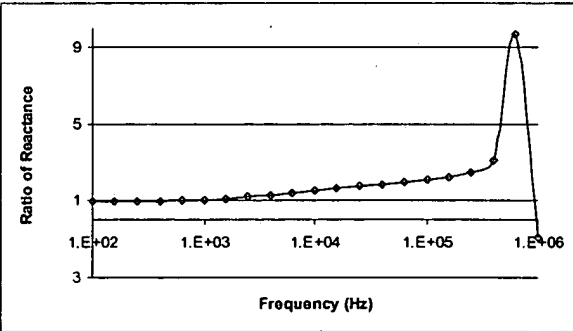


Figure 40(A)

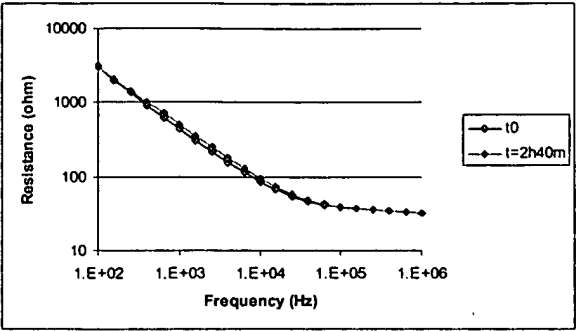


Figure 40(B)

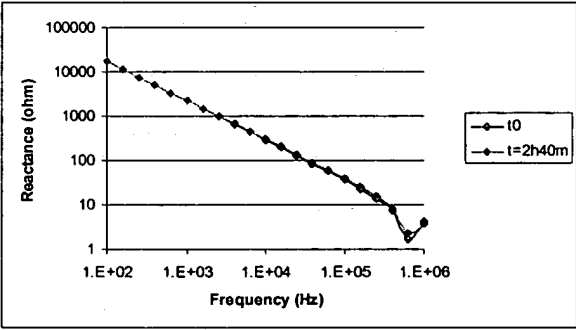


Figure 40(C)

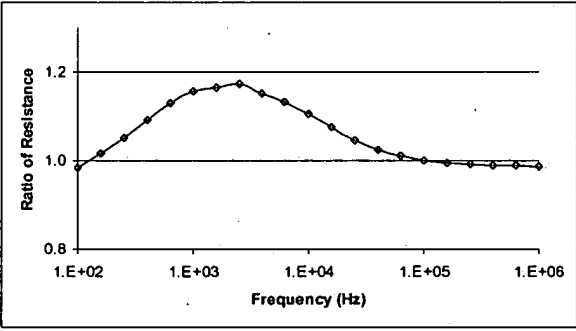


Figure 40(D)

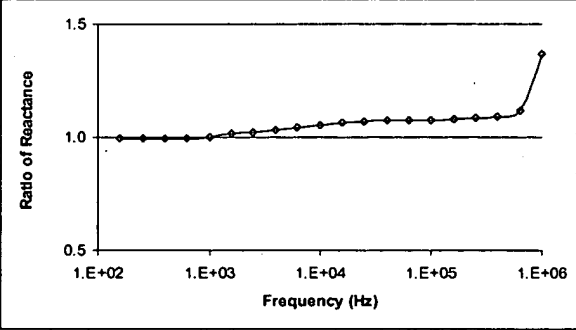


Figure 41(A)

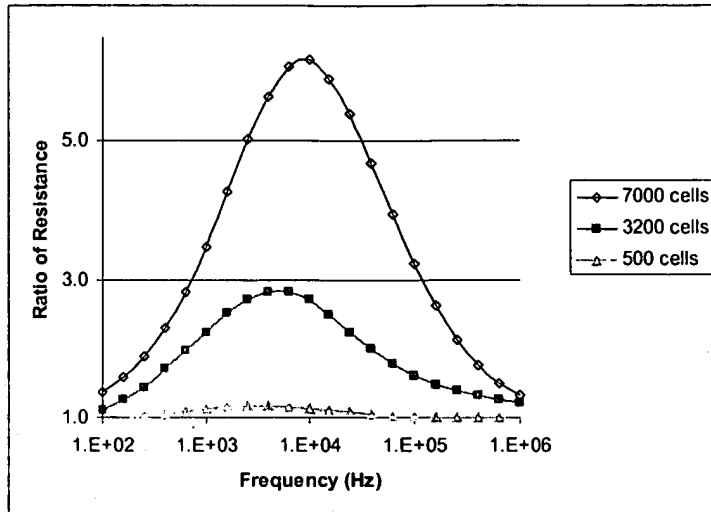


Figure 41(B)

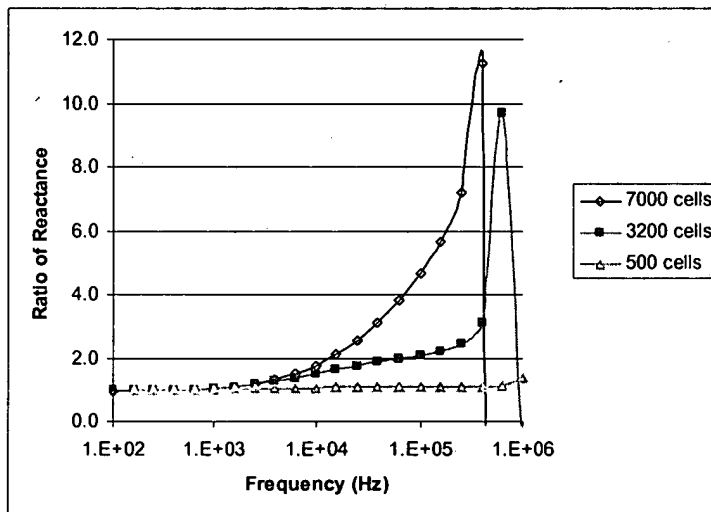
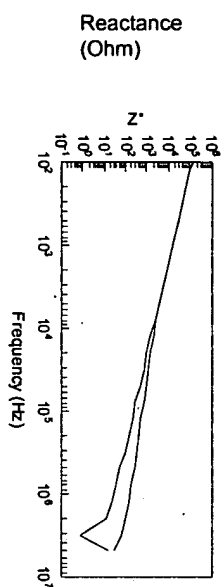
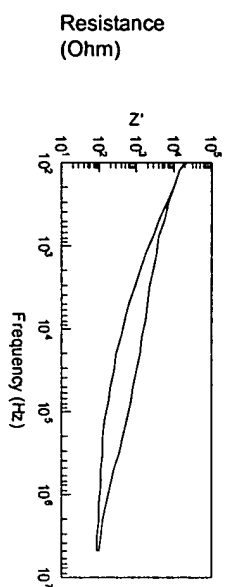
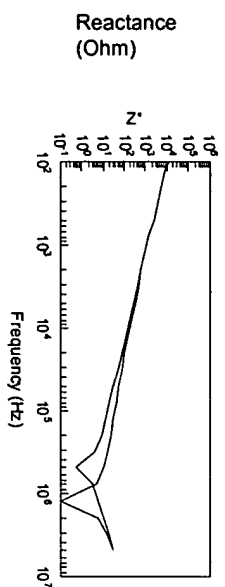
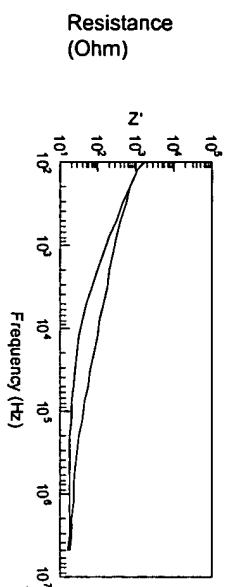


Figure 42 A

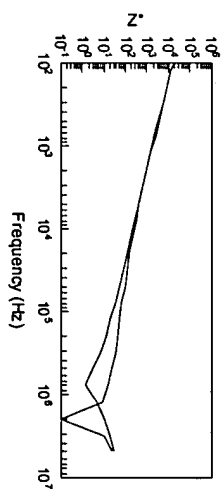
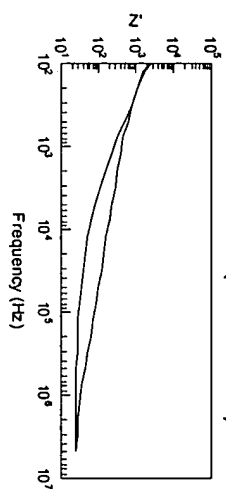
ZAD (50 μm :10 μm)



ZCF (48 μm :28 μm)



2BE (48 μm : 18 μm)



50 μm : 50 μm

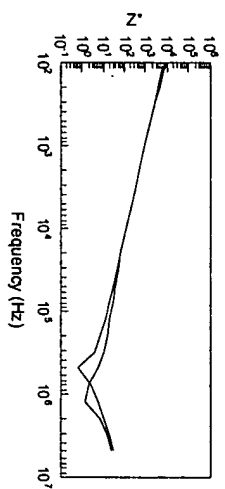
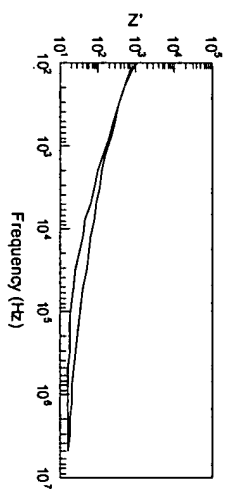


Figure 42 B

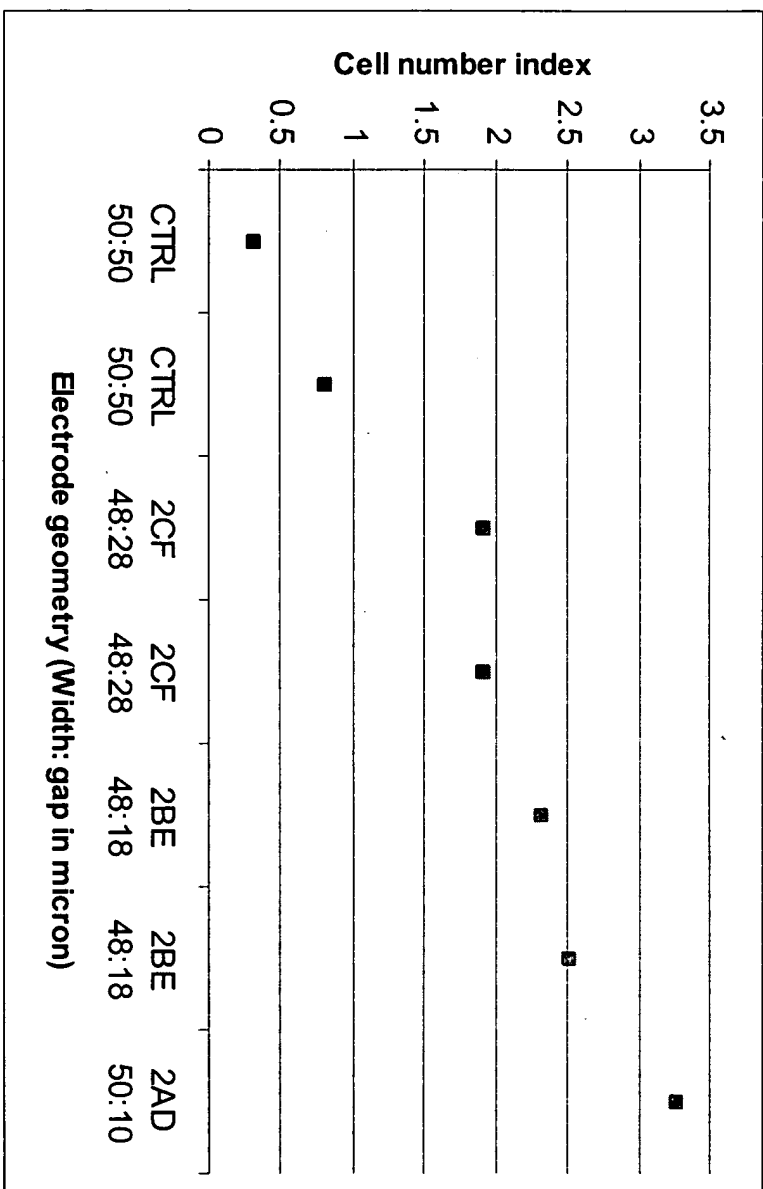


Figure 43

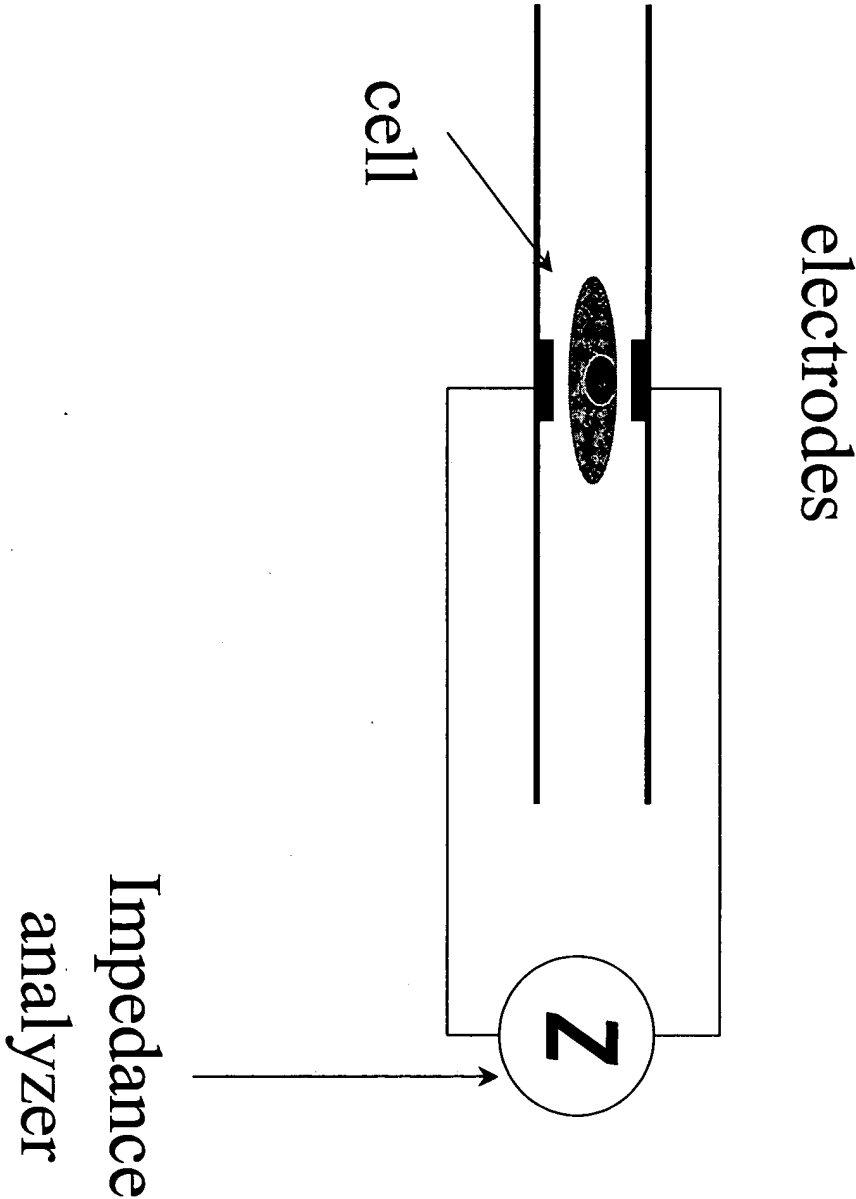


Figure 44

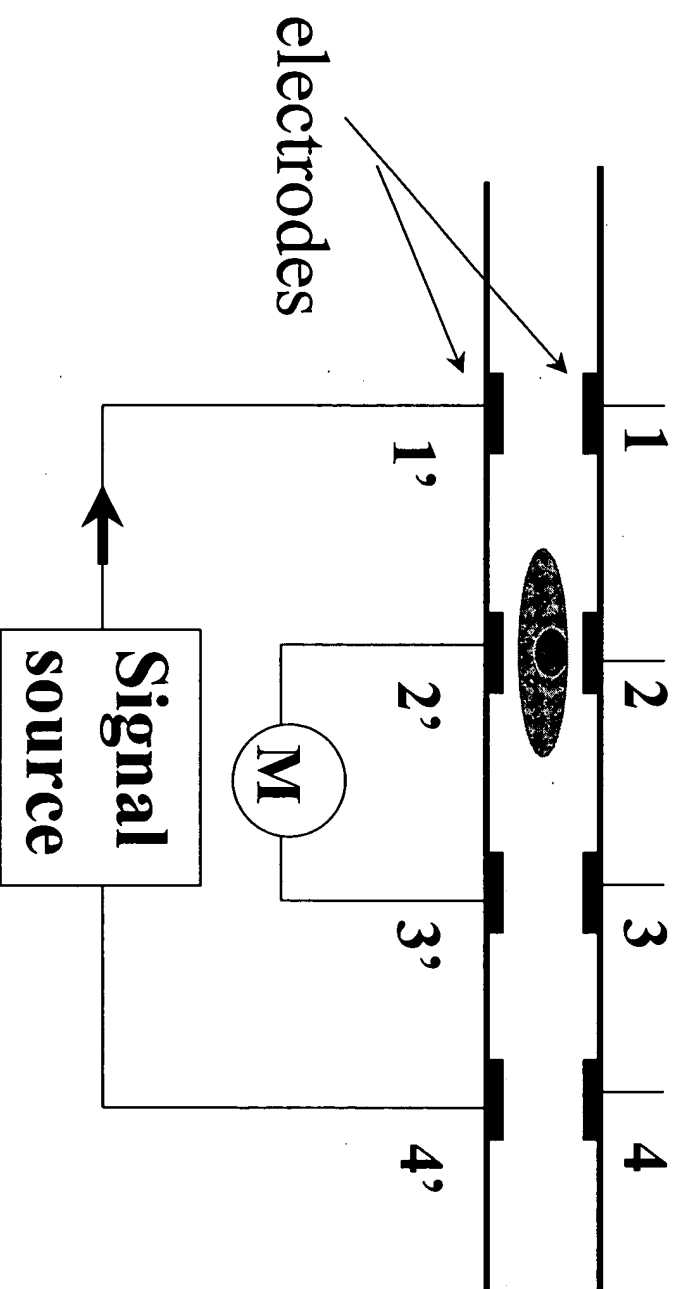


Figure 45

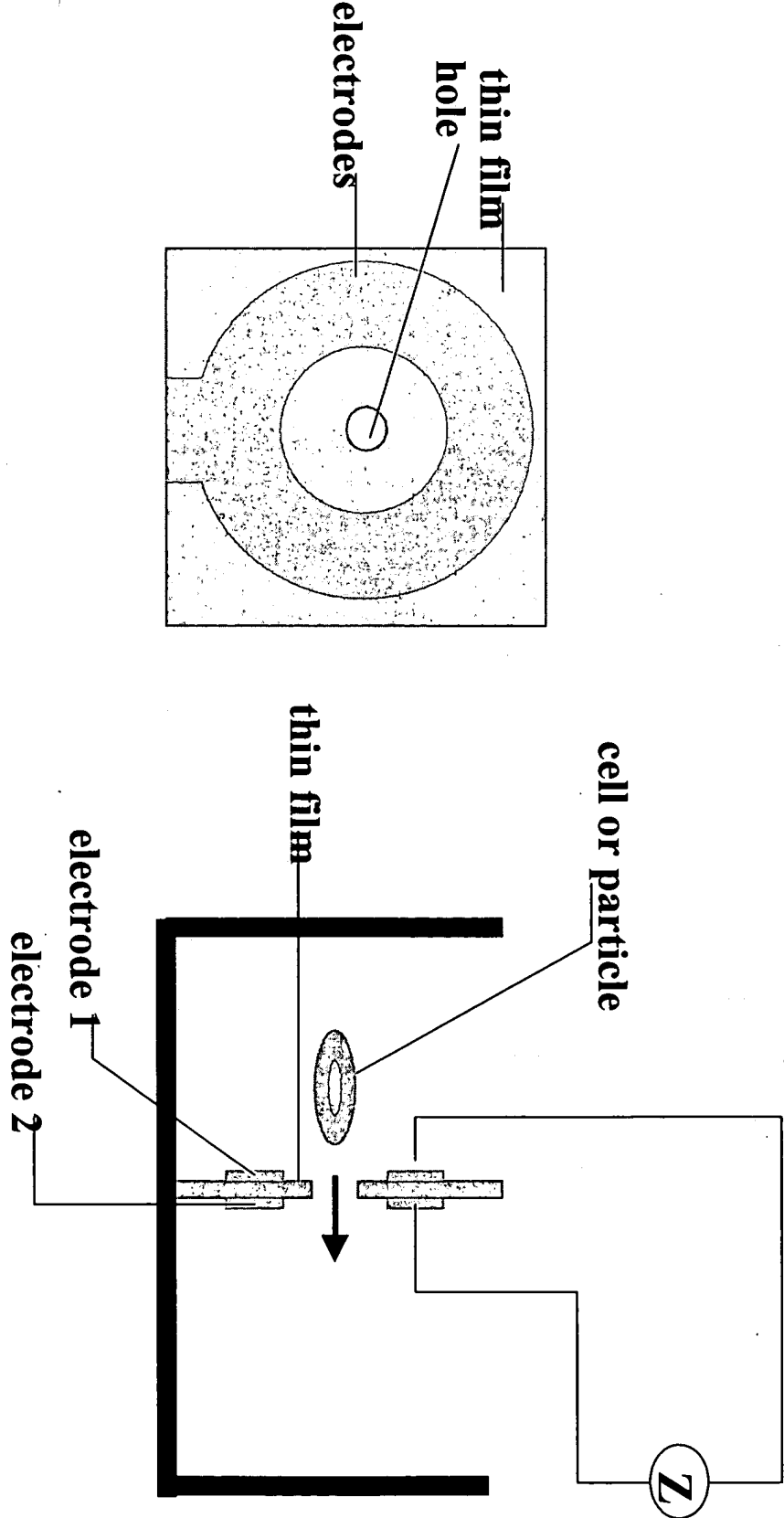


Figure 46

